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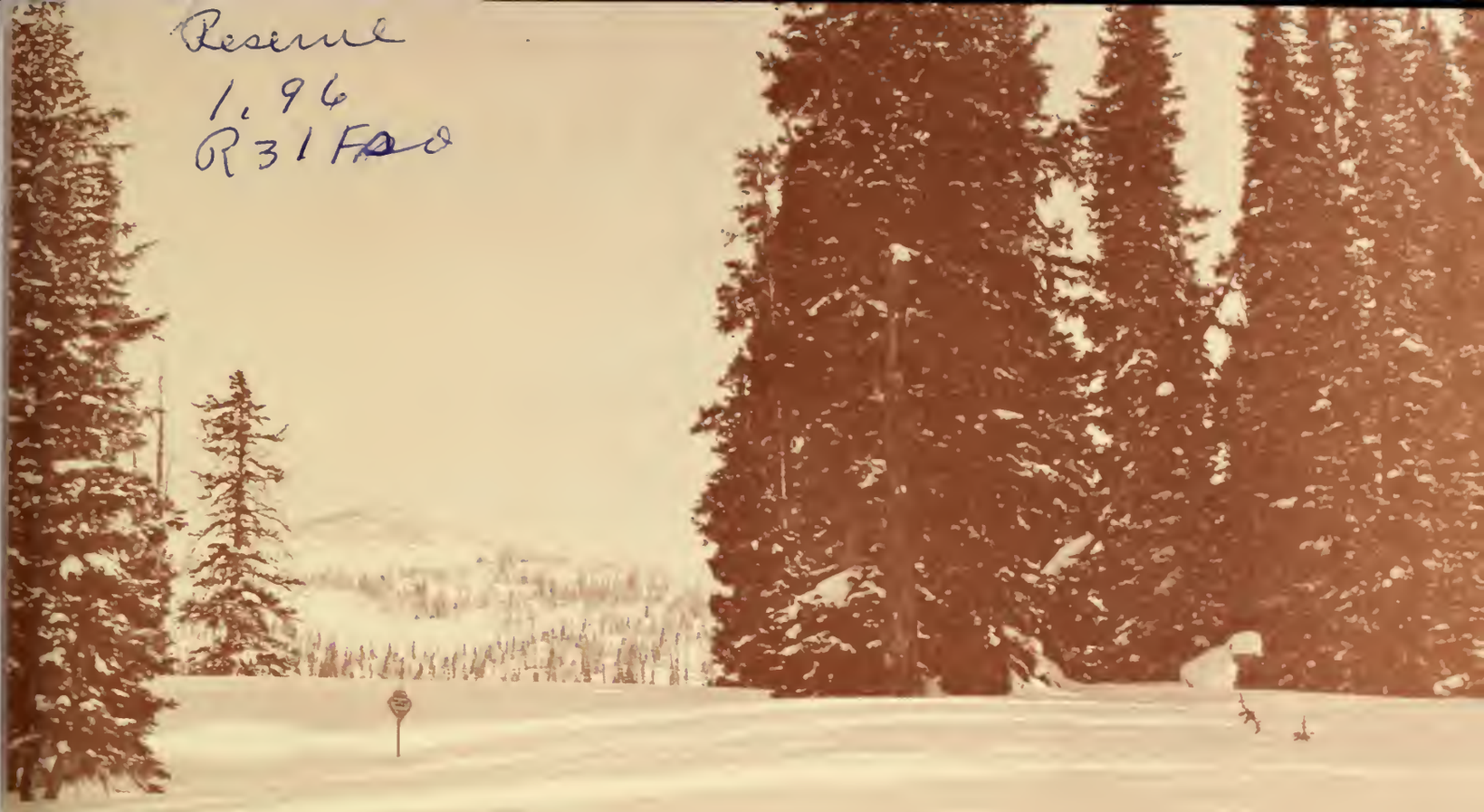

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CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above in cooperation with other Federal, State and private organizations.

AS OF
JAN. 1, 1968

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data or reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	P. O. Box 38, Boise, Idaho 83707
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 Federal Office Building, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

USDA-SCS PORTLAND OREG 1966

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WATER SUPPLY OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

JANUARY 8, 1968

Issued by

D.A. WILLIAMS
ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

Released by

A.J. WEBBER
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
PORTLAND, OREGON

In Cooperation with

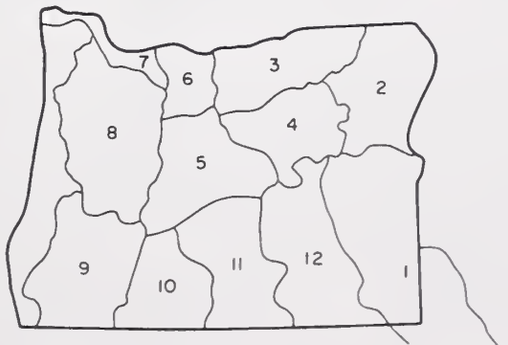
G. BURTON WOOD
DIRECTOR
OREGON AGRICULTURAL
EXPERIMENT STATION

CHRIS L. WHEELER
STATE ENGINEER
STATE OF OREGON

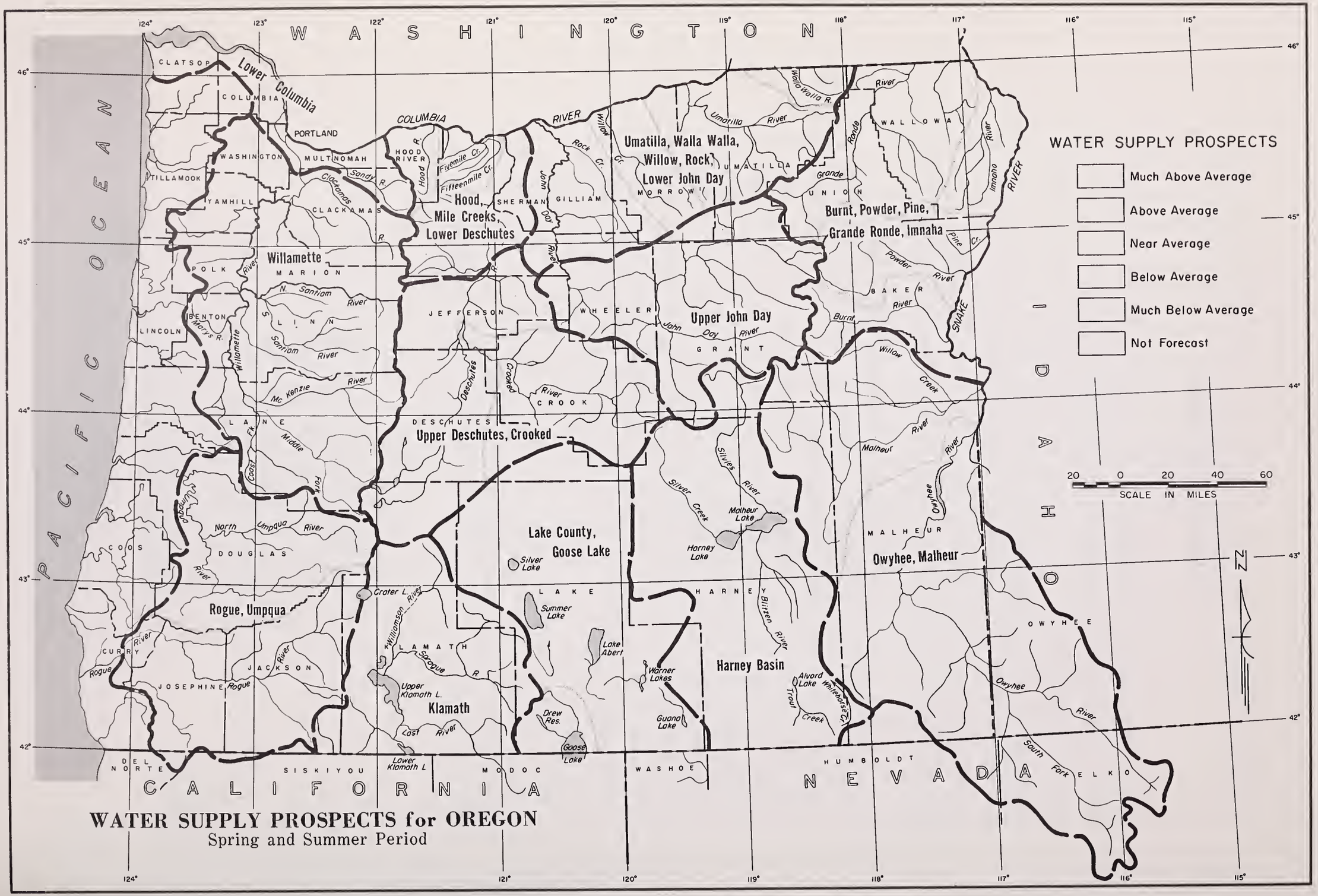
Report prepared by

W.T. FROST, Snow Survey Supervisor
and
TOMMY A. GEORGE, Assistant Snow Survey Supervisor
SOIL CONSERVATION SERVICE
1218 S W WASHINGTON ST
PORTLAND, OREGON 97205

TABLE OF CONTENTS



WATERSHED AREA LOCATIONS



WATER SUPPLY PROSPECTS for OREGON

Spring and Summer Period

WATER SUPPLY OUTLOOK for OREGON

January 1, 1968

Outlook for 1968 water supplies in Oregon varies from poor to fair. Oregon streams have not yet recovered from the long, hot and dry summer and fall. Rainfall, snowpack and soil moisture conditions are all below or much below average. Conditions in Lake, Klamath, Jackson, Josephine and Douglas Counties are not quite so discouraging.

SNOW COVER

Water content of the mountain snowpack on January first was close to the 15-year average (1948-62) in Klamath, Lake, Jackson and Douglas Counties. In all other parts of the State the snowpack varies from 70 percent of the average down to 46 percent on the John Day, 52 percent in northern Harney County and 49 percent in Malheur County.

One-third of the total annual snowpack is usually accumulated on Oregon watersheds by January first. This year's snow accumulation is much below normal. Accumulation in January and February will need to be much greater than usual if Oregon is to have satisfactory water supplies in the spring and summer season of 1968.

SOIL MOISTURE

Soils in the upper elevations of mountain watersheds are much drier than last year but are not equal to the record-low conditions of some earlier years. These dry soils will absorb from 3 to 10 inches of snowmelt water next spring--water which would have contributed directly to streamflow if fall rains had completed the recharge of the watersheds.

PRECIPITATION

Fall precipitation in the northern half of the State, September through October, has ranged from normal up to 145 percent of average amounts in Northeastern Oregon, according to data furnished by the U. S. Weather Bureau of Portland. In the south half the range was from 95 percent on the Malheur and Owyhee Rivers to 67 percent average in the Klamath Basin. Winter precipitation, November 1 to January 1, ranges from 47 percent average in the Deschutes Basin up to 73 percent in the watershed of the Burnt, Powder and Grande Ronde Rivers.

continued--

RESERVOIR STORAGE

Water stored in 25 Oregon irrigation reservoirs totals 1,435,300 acre feet or 101 percent of the average for January first. This is 102,400 acre feet or 8 percent more than last year on this date.

These reservoired water supplies will probably "save the day" for the acres they serve except for Antelope, Cold Springs, McKay, Crane Prairie, Wickiup, Fish Lake and Fourmile Lake Reservoirs, where present stored water is far below usual amounts for this date.

STREAMFLOW

Flow of Oregon streams next spring and summer is expected to be from below average to much below, unless winter storms cause snow accumulation greatly in excess of the usual amounts.

Preliminary figures of streamflow* for key Oregon streams for the period October 1, 1967 to January 1, 1968 are as follows:

Lake Owyhee Net Inflow	90	percent	average	(1948-62)
Grande Ronde at La Grande	71	"	"	"
Umatilla at Pendleton	91	"	"	"
John Day at Service Creek	53	"	"	"
Deschutes at Moody	88	"	"	"
Middle Fork Willamette	52	"	"	"
Umpqua near Elkton	40	"	"	"
Rogue at Raygold	47	"	"	"
Upper Klamath Lk. Net Inflow	74	"	"	"

These figures show that Oregon's streams have not yet recovered from the long, hot and dry summer and fall.

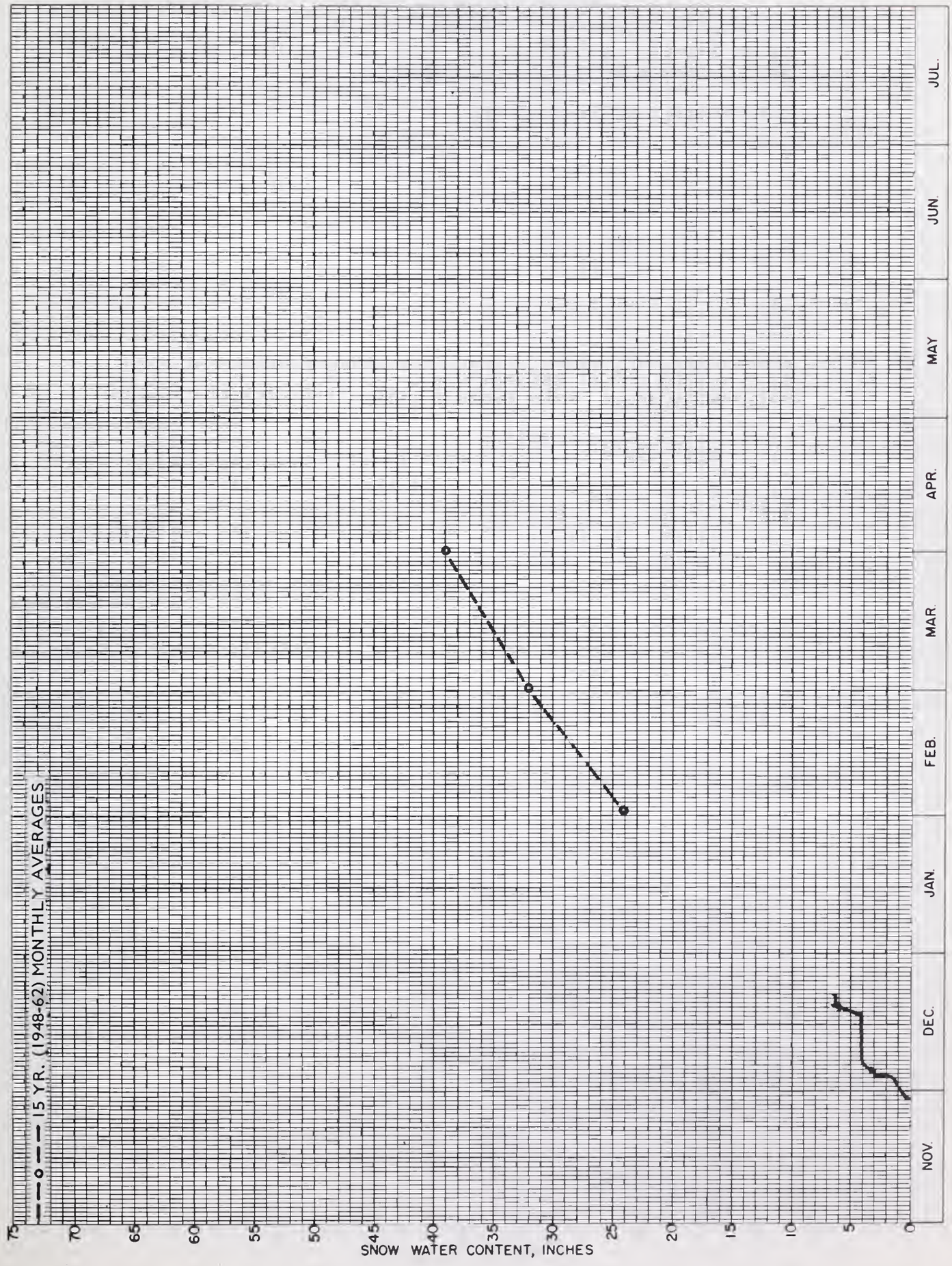
*Data furnished by U. S. Geological Survey, Pacific Power and Light Co., and North and South Boards of Control of the Owyhee Project.

U. S. DEPARTMENT of AGRICULTURE
CONSERVATION OF WATER BEGINS WITH THE SNOW SURVEY
SOIL CONSERVATION SERVICE

USDA-SOIL CONSERVATION SERVICE DAILY RADIO REPORTS (8:00 A.M.)
by

COLD SPRINGS CAMP
AUTOMATIC SNOW STATION

KLAMATH RIVER WATERSHED
AT 6100 FEET ELEVATION



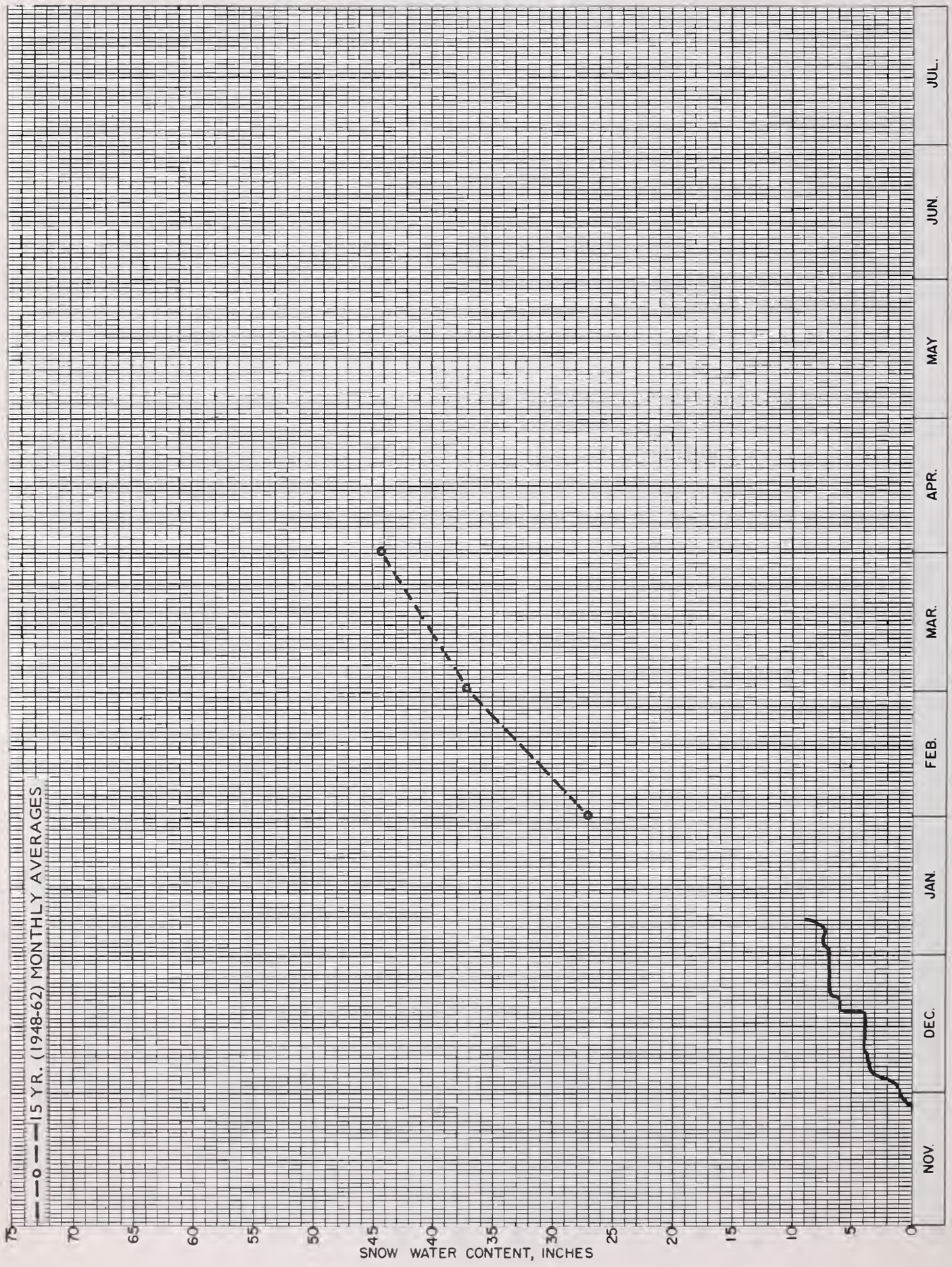
USDA-SOIL CONSERVATION SERVICE DAILY RADIO REPORTS (8:00 A.M.)

by

IRISH-TAYLOR

AUTOMATIC SNOW STATION

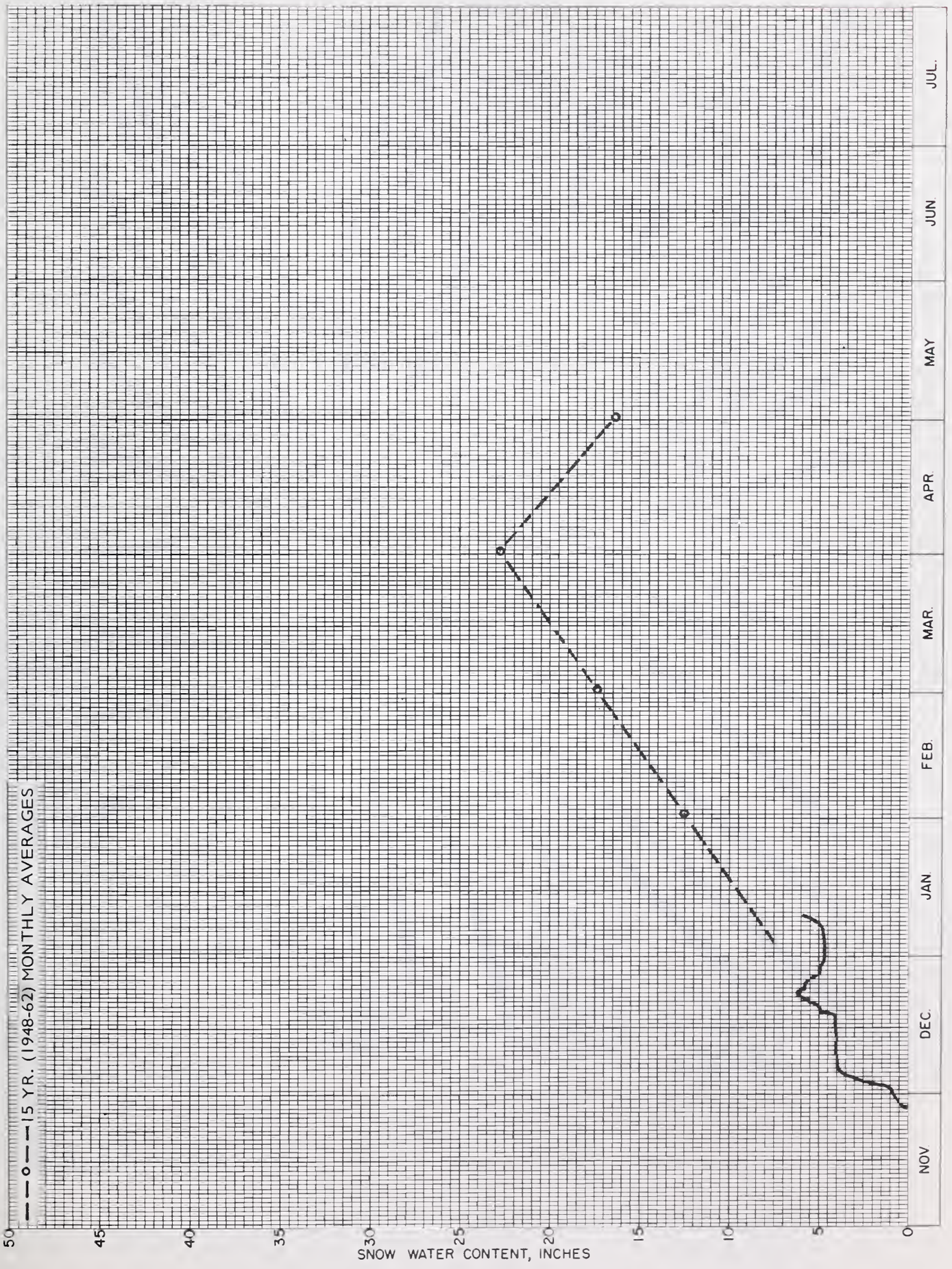
UPPER DESCHUTES RIVER WATERSHED
AT 5500 FEET ELEVATION



USDA-SOIL CONSERVATION SERVICE DAILY RADIO REPORTS (8:00 A.M.)
by

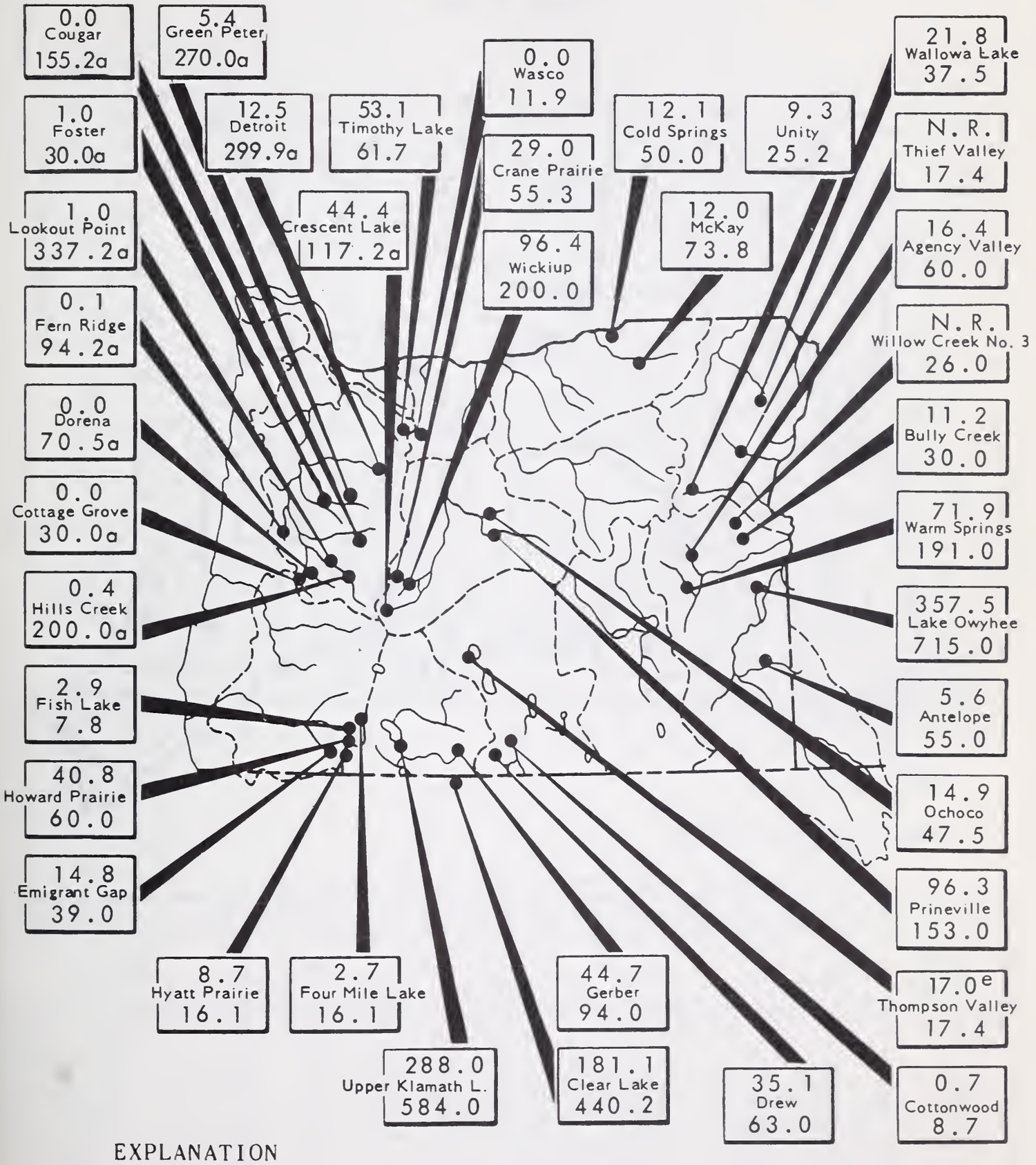
PEAVINE RIDGE
AUTOMATIC SNOW STATION

CLACKAMAS RIVER WATERSHED
AT 3500 FEET ELEVATION



STORAGE STATUS of OREGON RESERVOIRS
usable contents in thousands of acre feet

January 1, 1968



EXPLANATION

687.0 Lake Owyhee 715.0 ---Contents ---Capacity

(a) Multiple purpose reservoir - space reserved for flood runoff.
N. R. - No report.
(e) Estimated.

MOUNTAIN SOIL MOISTURE in OREGON
as percent of capacity

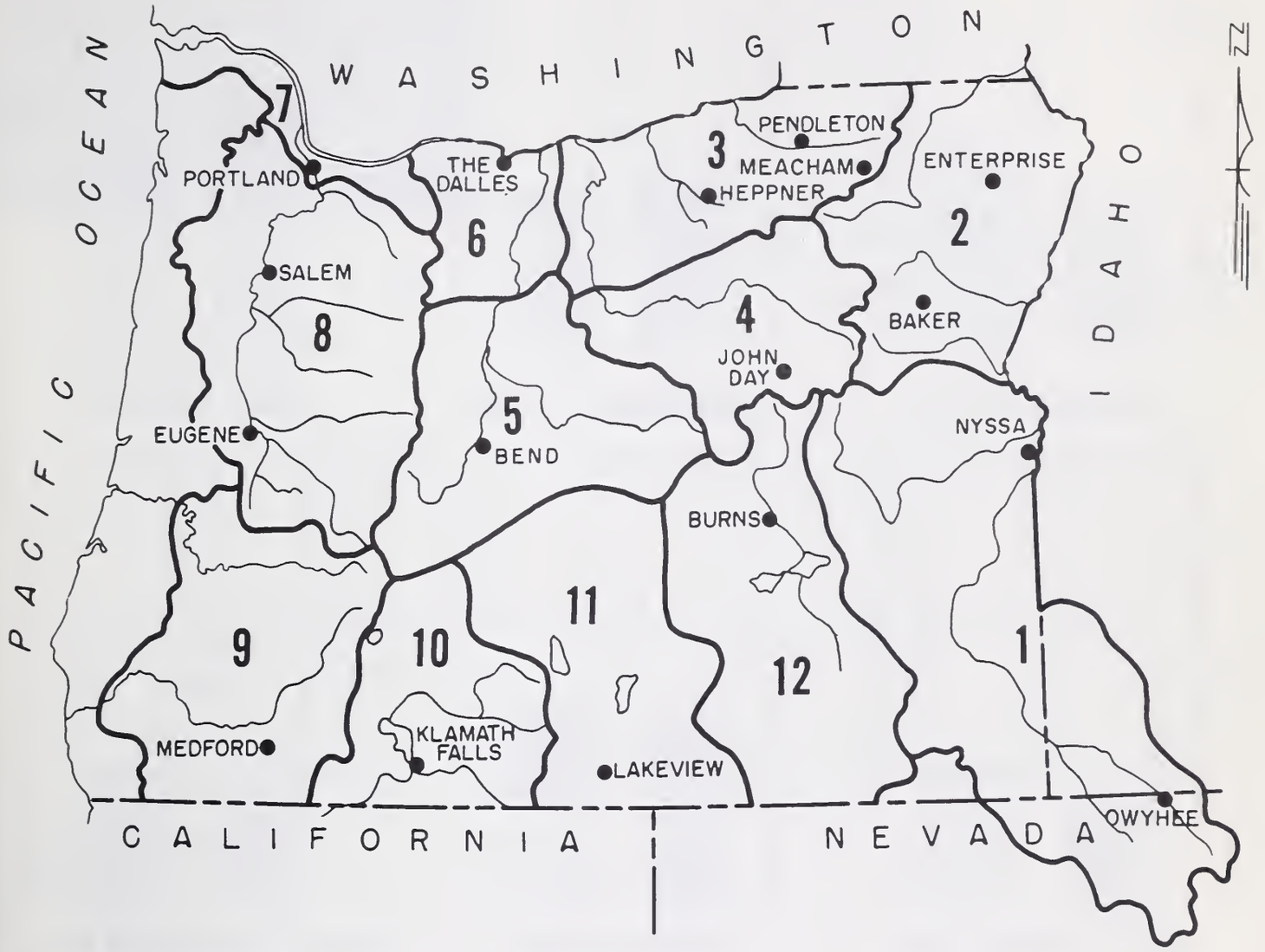
January 1, 1968

● Soil Moisture Station

**Moisture studies not yet developed in these areas.*

VALLEY PRECIPITATION in OREGON [a]

January 1, 1968

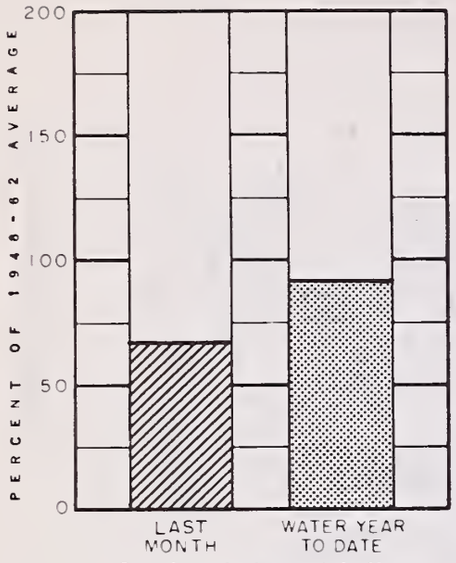


PRECIPITATION as PERCENT of the 1948-62 AVERAGE					
STATION	LAST MONTH	WATER YEAR TO DATE [b]	STATION	LAST MONTH	WATER YEAR TO DATE [b]
Baker Apt.	69	99	Lakeview	72	78
Bend	26	47	Meacham	98	103
Burns	65	86	Medford Apt.	103	86
Enterprise	102	105	Nyssa	32	62
Eugene Apt.	72	77	Pendleton Apt.	30	42
Heppner	54	52	Portland Apt.	75	76
John Day	38	77	Salem Apt.	84	84
Klamath Falls Apt.	44	45	The Dalles	60	61
			Owyhee (Nev.)	114	91

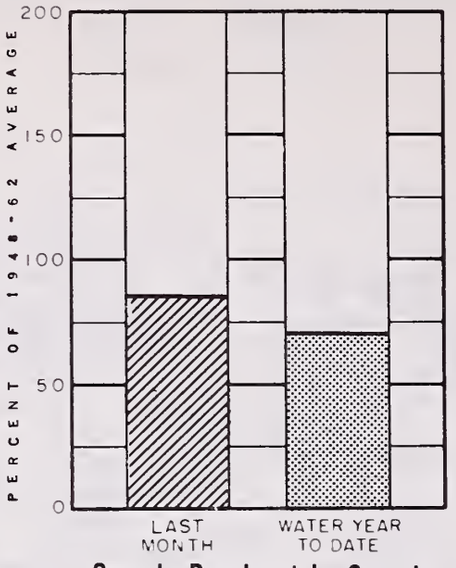
(a) Preliminary data furnished by the U.S. Weather Bureau. (b) Oct. 1 to date. (c) Report delayed.

CURRENT OREGON STREAMFLOW

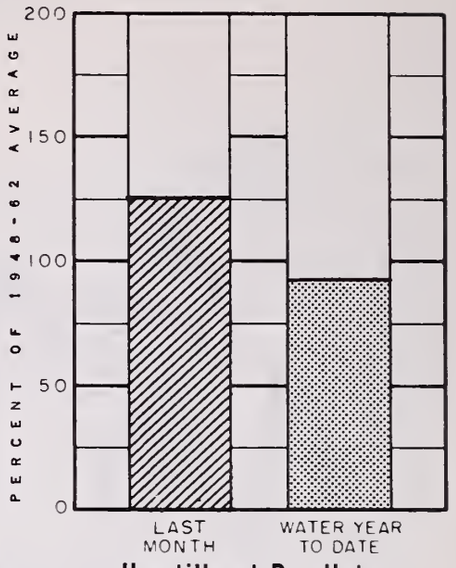
January 1, 1968



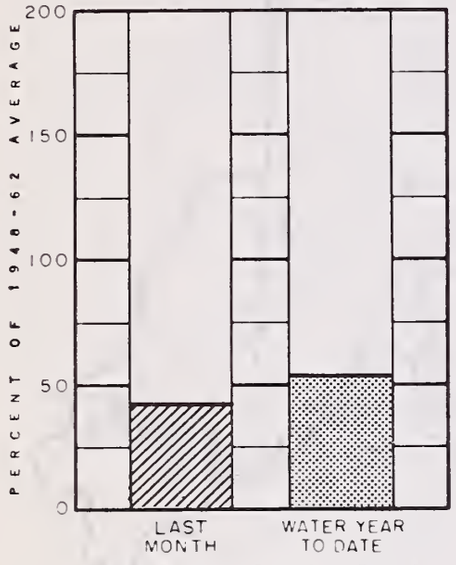
Owyhee Lake net inflow



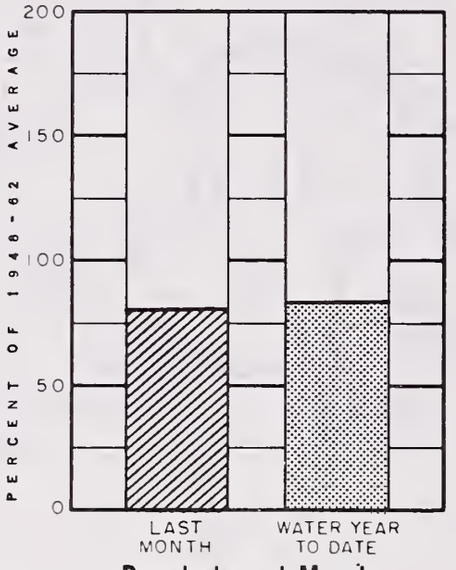
Grande Ronde at La Grande



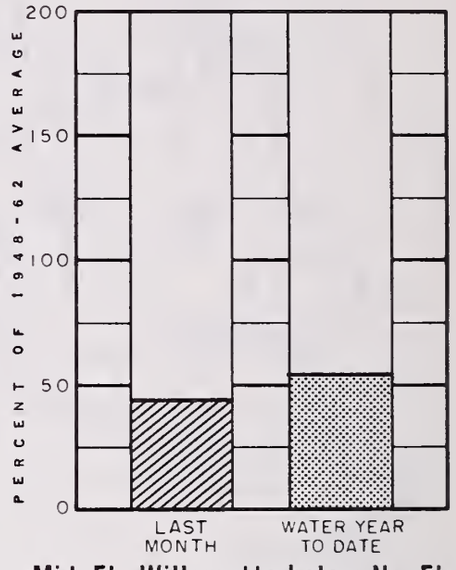
Umatilla at Pendleton



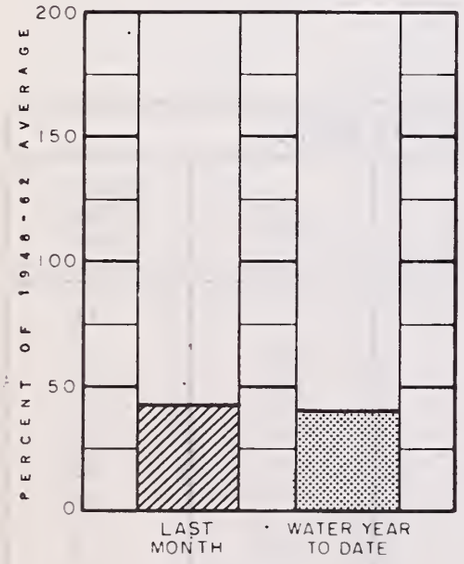
John Day at Service Creek



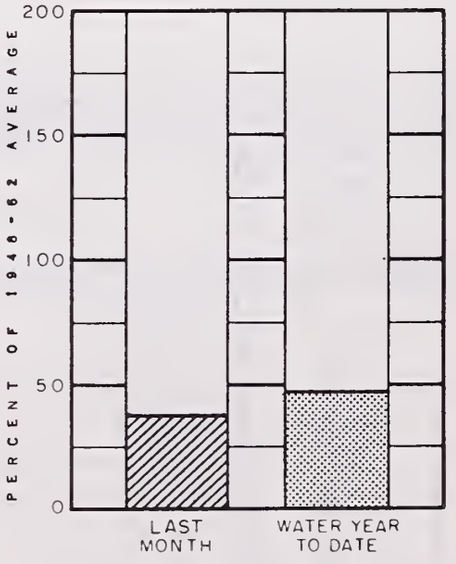
Deschutes at Moody



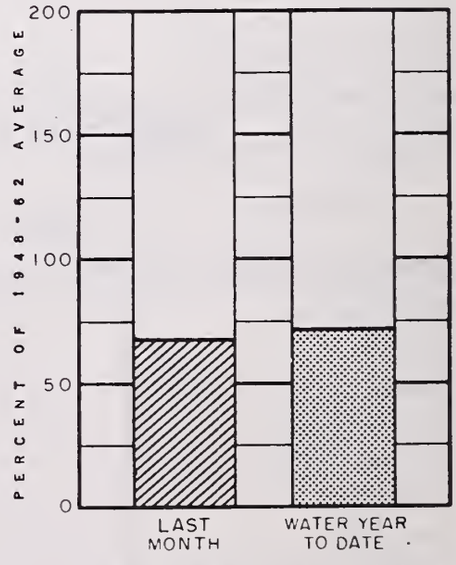
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



Rogue at Raygold



Upper Klamath Lake net inflow

Data furnished by U.S. Geological Survey; The Pacific Power and Light Co.; and North and South Boards of Control Owyhee Project.

Area 1

WATER SUPPLY OUTLOOK
OWYHEE, MALHEUR WATERSHEDS
OREGON

as of

January 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Malheur County ranchers, farmers and other water users can expect 1968 water supplies only slightly below the average because of excellent carryover water in reservoirs. Streamflow will be much below average unless remaining winter months bring much more than the usual snow accumulation.

SNOW COVER

Water content of the mountain snowpack is only half of the amount usually present on Malheur County watersheds at the first of the year.

PRECIPITATION

Fall precipitation in this southeast Oregon area has been 95 percent of the average according to the U. S. Weather Bureau. Winter precipitation, up to January first, has been only 71 percent of the average.

SOIL MOISTURE

Watershed soils under the snowpack are still drier than usual in spite of near average fall rains. Soil moisture on the Owyhee is about 86 percent of capacity and on the Malheur about 64 percent. These dry soils will soak up about 2 to 9 inches of snowmelt water in the spring.

RESERVOIR STORAGE

Storage in Warmsprings, Agency Valley and Bully Creek Reservoirs totaled about 99,500 acre feet on January first, compared with 64,000 acre feet a year ago. Lake Owyhee held about 357,500 acre feet on January first this year compared with 292,700 acre feet last year on this date. On Jordan Creek, Antelope Reservoir held 5,600 acre feet at the beginning of the new year compared with no storage at this date last year.

STREAMFLOW

Flow into Lake Owyhee from October 1, 1967 to January 1, 1968 has totaled 45,300 acre feet or 90 percent of the average flow in the 15-year period, 1948-62.

Above average streamflow will be needed in the spring and summer of 1968 in Malheur County to adequately increase reservoir storage and provide reasonable water supplies for the county.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Boulder Creek Bully Creek Cow Creek Jordan Creek Jordan Valley Irrig. Dist. McDermitt Creek Oregon Canyon Creek Owyhee Project Succor Creek Ternmile Creek Vale-Oregon Irrig. Dist. Warmsprings Irrig. Dist. Willow Creek (Reservoired)	Forecasts begin in the February 1 report which will be issued about February 10, 1968.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Agency Valley	60.0	16.4	13.9	17.3
Antelope	55.0	5.6	0.0	- -
Bully Creek	30.0	11.2	3.1	- -
Owyhee	715.0	357.5	293.1	316.5
Warmsprings	191.0	71.9	47.0	44.7
Willow Creek #3	26.0	b		

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1968

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
1780	Jordan Creek above Lone Tree Creek	c	April-July	98	
		c	April-Sept.	98	
2140	Malheur near Drewsey	c	Feb.-July	122	
		c	April-Sept.	82	
2175	Malheur, North Fork at Beulah[d]	c	Feb.-July	79	
		c	April-Sept.	65	
1825	Owyhee Reservoir net Inflow[k]	c	Feb.-July	534	
		c	April-Sept.	383	
	NOTE: FORECASTS BEGIN ON FEB. 1, 1968.				

SOIL MOISTURE

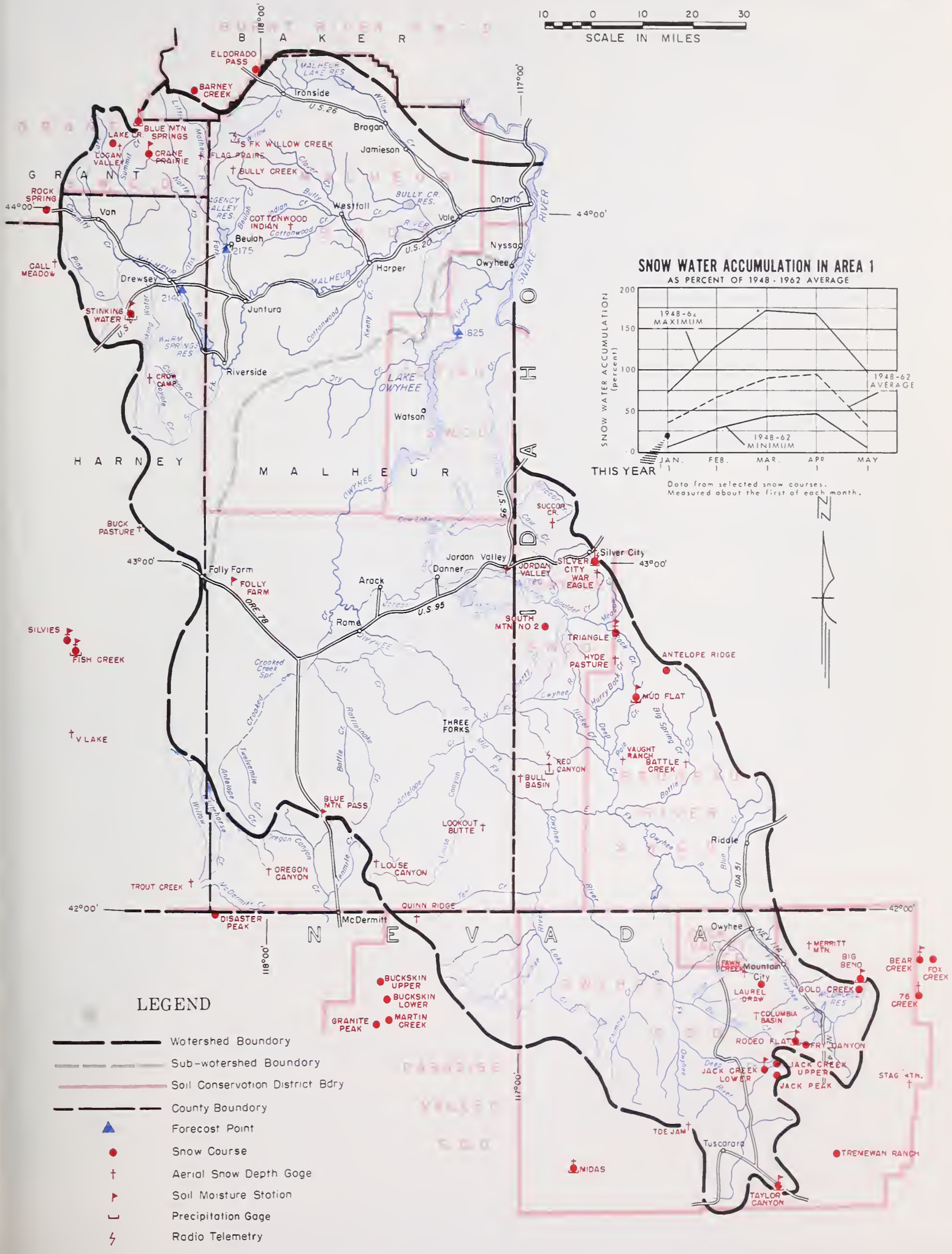
STATION NAME	STATION ELEVATION	PROFILE (Inches) DEPTH	PROFILE (Inches) CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Bear Creek (Nev.)	7800	72	16.8	c			
Big Bend (Nev.)	6700	48	16.7	12/28	14.7	15.3	14.6
Blue Mtn. Springs	5900	42	16.9	12/28	7.2	7.8	6.6
Crane Prairie	5375	48	18.2	c			
Folly Farm	4450	30	12.5	c			
Jack Cr., Lower (Nev.)	6800	48	8.6	c			
Jordan Valley	4390	48	19.3	12/28	14.6	- -	14.7[f]
Mud Flat (Ida.)	5500	48	12.8	c			
Rodeo Flat (Nev.)	6800	42	11.0	12/28	10.5	10.5	10.6
Stinking Water Summit	4800	48	21.9	c			
Taylor Canyon (Nev.)	6200	48	15.1	12/29	14.5	11.9	12.4
Triangle (Ida.)	5150	48	16.6	c			

SNOW

SNOW COURSE NAME	SNOW COURSE ELEVATION	CURRENT INFORMATION DATE OF SURVEY	CURRENT INFORMATION SNOW DEPTH (Inches)	CURRENT INFORMATION WATER CONTENT (Inches)	PAST RECORD WATER CONTENT (Inches) LAST YEAR	PAST RECORD WATER CONTENT (Inches) 1948-62 AVERAGE
Antelope Ridge (Ida.)	5900	c				
Barney Creek	5950	c				
Battle Creek (Ida.)	5700	c				
Bear Creek (Nev.)	7800	12/31	26	8.2	- -	7.3[h]
Big Bend (Nev.)	6700	12/28	T	T	2.7	3.5[h]
Blue Mountain Springs	5900	12/28	14	3.5	6.8	6.0[h]
Buck Pasture	5700	c				
Buckskin, Lower (Nev.)	6700	c				
Buckskin, Upper (Nev.)	7200	c				
Bull Basin (Ida.)	5600	c				
Bully Creek	5300	c				
Call Meadow	5340	c				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 1

AS PERCENT OF 1948 - 1962 AVERAGE

Data from selected snow courses.
Measured about the first of each month.

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- Soil Moisture Station
- Precipitation Gage
- Radio Telemetry

SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	CURRENT INFORMATION: SNOW DEPTH (Inches)	CURRENT INFORMATION: WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	PAST RECORD: WATER CONTENT (Inches) 1948-62 AVERAGE
Columbia Basin (Nev.)	6650	c				
Cottonwood-Indian	4320	c				
Crane Prairie	5375	c				
Crow Camp	5500	c				
Disaster Peak (Nev.)	6500	c				
Eldorado Pass	4600	12/28	0.4	0.1	3.2	1.2 h
Fawn Creek (Nev.)	7000	c				
Fish Creek	7900	c				
Flag Prairie	4750	c				
Fox Creek (Nev.)	6800	c				
Fry Canyon (Nev.)	6700	12/28	6	1.7	3.3	3.1 h
Gold Creek (Nev.)	6600	12/28	0	0.0	2.2	2.2 h
Granite Peak (Nev.)	7800	c				
Hyde Pasture (Ida.)	5800	c				
Jack Creek, Lower (Nev.)	6800	c				
Jack Creek, Upper (Nev.)	7250	c				
Jack Peak (Nev.)	8420	c				
Lake Creek	5120	12/29	10	2.4	4.4	- -
Laurel Draw (Nev.)	6700	c				
Logan Valley	5100	c				
Lookout Butte	5650	c				
Louse Canyon	6440	c				
Martin Creek (Nev.)	6700	c				
Merritt Mountain (Nev.)	7000	c				
Midas (Nev.)	7200	c				
Mud Flat (Ida.)	5500	c				
Oregon Canyon	6950	c				
Quinn Ridge (Nev.)	6300	c				
Red Canyon (Ida.)	6500	c				
Rock Spring	5100	12/29	4	0.7	2.1	2.1
Rodeo Flat (Nev.)	6800	12/28	T	T	2.4	3.4 h
76 Creek (Nev.)	7100	c				
Silver City (Ida.)	6400	12/28	14	4.1	5.0	6.5 h
Silvies	6900	c				
South Mountain #2 (Ida.)	6340	12/27	9	2.2	3.6	4.5 h
Stag Mountain (Nev.)	7800	c				
Stinking Water	4800	12/26	7	1.7	2.0	2.0 h
Succor Creek (Ida.)	6100	c				
Taylor Canyon (Nev.)	6200	12/29	T	T	3.1	1.8 h
Toe Jam (Nev.)	7700	c				
Tremewan Ranch (Nev.)	5700	12/28	T	T	1.0	0.4 h
Triangle (Ida.)	5150	c				
Trout Creek	7800	c				
"V" Lake	6600	c				
Vaught Ranch (Ida.)	5950	c				
War Eagle (Ida.)	7700	c				

Area 2

WATER SUPPLY OUTLOOK
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS
OREGON

as of

JANUARY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in Baker, Union and Wallowa Counties should plan on fair to average water supplies this spring and summer if trends continue. Stored water conditions are very good and should provide an average supply to many water users, however, those directly diverting from streams will probably have only a fair supply.

SNOW COVER

Snowpack accumulation is currently 64% average for the area. Normally about one-third of the winter's total snowpack is present January 1, but it is much below this figure this year.

SOIL MOISTURE

Soil moisture stations in the area are reporting somewhat drier conditions this year than last, but conditions are still better than they were two years ago. Fall rains did not completely recharge the soil profile and, as a result, the soil moisture will detract from the runoff.

RESERVOIR STORAGE

Stored water in Unity and Wallowa Reservoirs for January 1 is much above the average and tends to brighten an otherwise dismal outlook.

Unity currently contains 9,300 acre feet compared to an average of 5,200, and Wallowa Lake is holding 21,800 acre feet compared to its average of 17,200 acre feet.

STREAMFLOW

Flow* of the Grande Ronde at La Grande was 85% of average for December and is only 71% for the water year to date. These figures indicate that in spite of good fall rains, the streams have still not recovered from the long, hot and dry summer.

Above average amounts of snow will need to be received in January and February to bring the current picture up to average.

*Provisional data furnished by U. S. Geological Survey, Portland, Oregon.

Report prepared by
A.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Alder Slope Baker Valley Big Creek Clover Cr. (nr. N. Powder) Cove Durkee Eagle Valley Elgin Enterprise-Joseph Hereford-Bridgeport Imnaha River La Grande-Island City Lostine-Wallowa No. Powder River-Wolf Cr. Pine Valley Powder River-Elk Creek Summerville Sumpter Valley Union-Hot Lake Unity	Forecasts begin in the February 1 report which will be issued about February 10, 1968.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Thief Valley	17.4	*b*		
Unity	25.2	9.3	6.6	5.2
Wallowa Lake	37.5	21.8	7.5	17.2

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1968

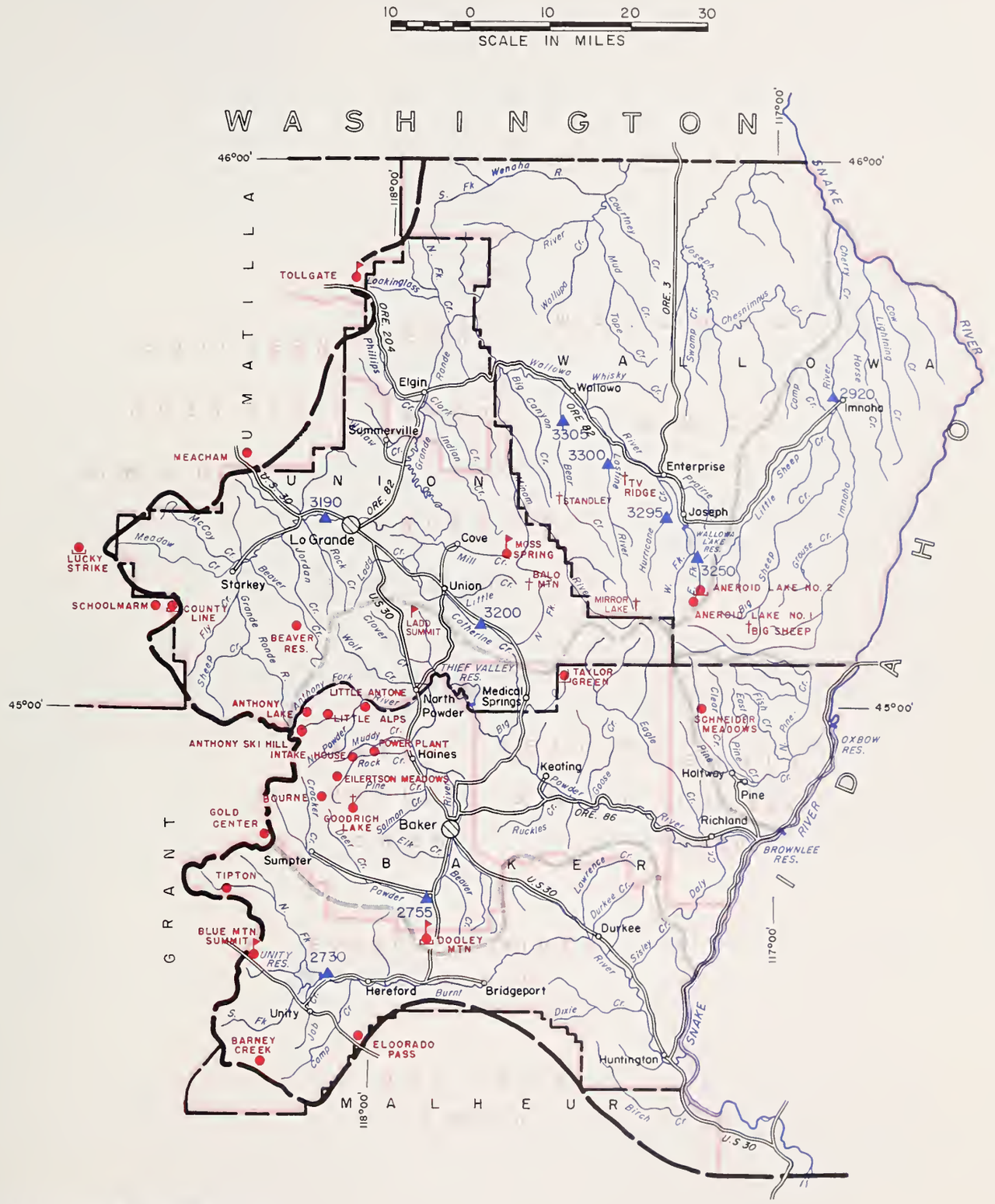
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
3305	Bear near Wallowa	*c*	April-Sept.	72	
2730	Burnt near Hereford[d]	*c*	Feb.-June	53	
		c	April-Sept.	41	
3200	Catherine near Union	*c*	April-Sept.	73	
2882	Eagle Creek abv. Skull Creek	*c*	April-July	166	
		c	April-Sept.	181	
3190	Grande Ronde at LaGrande	*c*	March-Sept.	246	
		c	April-Sept.	203	
3295	Hurricane near Joseph	*c*	April-Sept.	48	
2920	Imnaha at Imnaha	*c*	April-Sept.	318	
3300	Lostine near Lostine	*c*	April-Sept.	131	
2755	Powder near Baker	*c*	April-July	66	
		c	April-Sept.	67	
3250	Wallowa, East Fork near Joseph[d]	*c*	Feb.-Sept.	13.4	
		c	April-Sept.	12.0	
	NOTE: FORECASTS BEGIN ON FEB. 1, 1968				

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Blue Mtn. Summit	5100	36	16.8	12/28	9.9	9.9	8.5
Dooley Mountain	5430	36	9.2	*b*			
Emigrant Springs	3925	48	22.3	12/22	14.8	17.1	13.1
Ladd Summit	3730	48	18.9	*b*			
Moss Springs	5850	42	25.8	*b*			
Tollgate	5070	48	23.6	12.28	18.2	18.6	17.2

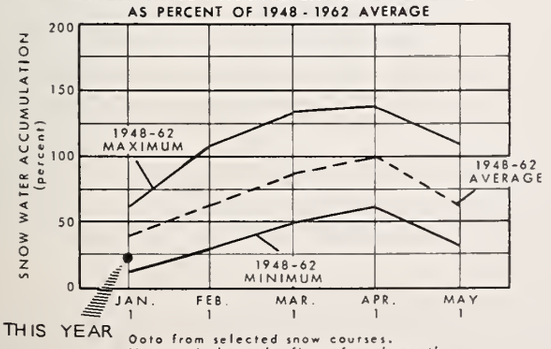
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 2

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station
- Aerial Snow Depth Gage
- Precipitation Gage

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Aneroid Lake #1	7480	*c*				
Aneroid Lake #2	7300	*c*				
Anthony Lake	7125	12/29	26	9.2	13.9	11.9
Bald Mountain (Ore.)	6700	*c*				
Barney Creek	5950	*c*				
Beaver Reservoir	5340	12/27	13	5.1	4.3	4.8[h]
Big Sheep	6200	*c*				
Blue Mountain Summit	5098	12/28	8	1.9	3.2	3.5
Bourne	5800	*c*				
County Line	4800	12/29	5	1.2	1.1	2.9[h]
Dooley Mountain	5430	12/22	17	3.5	4.7	3.5
Eilertson Meadows	5400	12/27	15	4.2	5.7	5.0[h]
Eldorado Pass	4600	12/28	0.4	0.1	3.2	1.2[h]
Gold Center	5340	*c*				
Goodrich Lake	6775	*c*				
Intake House	4930	12/27	18	6.3	5.0	- -
Little Alps	6200	12/29	14	4.2	5.8	- -
Little Antone	5000	12/29	10	3.0	3.3	- -
Lucky Strike	5050	*c*				
Meacham	4300	12/26	7	2.5	0.8	3.3[h]
Mirror Lake	8200	*c*				
Moss Springs	5850	*b*				
Power Plant	3990	12/27	13	3.7	1.8	- -
Schneider Meadows	5400	*c*				
Schoolmarm	4775	12/29	3	0.7	1.0	2.6[h]
Standley	7400	*c*				
Taylor Green	5740	*c*				
Tipton	5100	12/28	10	2.2	3.8	4.9[h]
Tollgate	5070	12/28	11	4.0	7.2	9.6[h]
TV Ridge	7000	*c*				

Area 3

WATER SUPPLY OUTLOOK
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS
OREGON

as of

JANUARY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in Umatilla, Morrow and Gilliam Counties can expect less than usual water in the 1968 irrigation season. Reservoired water supplies are at discouraging levels, the watershed soils are still relatively unrecharged and the mountain snowpack contains less than the average amount usually present on January first.

SNOW COVER

Early snows were partially removed by rainfall and snowmelt, but water content on January first was about 70 percent of the 15-year average (1948-62). These are better snow conditions than those which prevailed last year.

PRECIPITATION

Fall precipitation has been about 86 percent of the average according to the U. S. Weather Bureau. Winter precipitation, up to January first, has been only 68 percent of the average.

SOIL MOISTURE

Watershed soils under the snowpack picked up some moisture late in December, but remain drier than last year. These soils are now only 70 percent of capacity in moisture content.

RESERVOIR STORAGE

Storage in Cold Springs Reservoir was about 12,100 acre feet on January first, far below the 24,200 acre feet on hand one year ago. McKay Reservoir held about 12,000 acre feet the first of January this year compared with 11,300 acre feet last year, but the usual storage on this date is about 19,900 acre feet.

STREAMFLOW

Flow of the Umatilla River at Pendleton from October 1, 1967 to January 1, 1968 has been 49,000 acre feet or 91 percent of the 15-year average (1948-62) according to preliminary data provided by the U. S. Geological Survey.

Much above average streamflow will be needed next spring and summer if adequate water supplies are to be available. This will require much above average accumulation of snow in the remaining winter months.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Walla Walla River, No. Fk. Walla Walla River, So. Fk. Walla Walla River, Main Walla Walla River, Little Couse Creek Dry Creek Pine Creek Umatilla River, Main Wildhorse Creek Umatilla R. (Cold Springs (Reservoir) Umatilla River (McKay Res.) McKay Creek Birch Creek Butter Creek Willow Creek Rhea Creek Rock Creek (John Day tributary)	Forecasts begin in the February 1 report which will be issued about February 10, 1968.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cold Springs	50.0	12.1	24.2	20.9
McKay	73.8	12.0	11.3	19.9

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1968

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
0320	Butter Creek near Pine City	c	March-July	14.5	
0225	McKay near Pilot Rock	c	Feb.-July	62	
		c	April-Sept.	32	
0200	Umatilla near Gibbon	c	March-Sept.	116	
		c	April-Sept.	93	
0210	Umatilla at Pendleton	c	March-Sept.	247	
0110	Walla Walla, North Fork near Milton	c	March-Sept.	25	
		c	April-Sept.	19.6	
0100	Walla Walla, South Fork near Milton	c	March-Sept.	89	
		c	April-Sept.	76	
	NOTE: FORECASTS BEGIN ON FEB. 1, 1968				

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Athena-Weston	1700	48	18.7	12/28	11.4	10.9	12.0
Battle Mtn. Summit	4340	48	13.8	12/21	10.9	12.7	10.9
Emigrant Springs	3925	48	22.3	12/22	14.8	17.1	13.1
Tollgate	5070	48	23.6	12/28	18.2	18.6	17.2

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) 1948-62 AVERAGE
Arbuckle Mountain	5400	c				
Battle Mountain Summit	4340	12/21	10	1.0	0.3	- -
Blue Mountain Camp	4300	12/28	7	1.8	2.0	- -
Emigrant Springs	3925	12/22	17	4.1	0.3	2.3[h]
Lucky Strike	5050	c				
Meacham	4300	12/26	7	2.5	0.8	3.3[h]
Tollgate	5070	12/28	11	4.0	7.2	9.6[h]
Walla Walla Diversion	2400	b				
Weston Mountain	2700	12/28	0	0.0	0.2	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

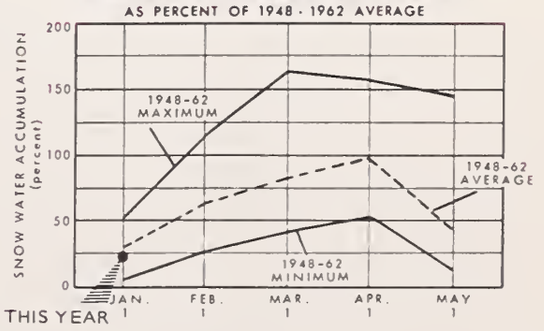
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station
- Precipitation Gage

SNOW WATER ACCUMULATION IN AREA 3

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

WATER SUPPLY OUTLOOK
UPPER JOHN DAY WATERSHEDS
OREGON

as of

JANUARY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in Grant and Wheeler Counties can expect only fair water supplies next spring and summer. Streams in the area are flowing much below average and snow-stored water to date is only half of the normal amount.

SNOW COVER

Current snow surveys indicate that the snow water content for the area is only 46 percent of average. Normally one-third of the total winter's snow accumulation has been received by January 1, but this year's total to date is much below this figure.

PRECIPITATION

According to the U. S. Weather Bureau, fall precipitation was about 105 percent of average and the winter precipitation to date is only 60 percent of average.

SOIL MOISTURE

The soil moisture conditions are drier than last year and compare closely with those experienced two years ago. The profile was not completely recharged from the good fall rains and will subtract 3 to 8 inches from the snowpack melt.

STREAMFLOW

The flow of the John Day at Service Creek last month was 29,900 acre feet, which is only 42 percent of average, while flow for the water year to date has been only 53 percent of average. These preliminary figures from the U. S. Geological Survey, indicate that streams have still not recovered from the long, hot, dry summer.

Much above average snowfall will need to occur during the next several months to bring the outlook up to normal.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1968

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
0385	John Day at Prairie City	c	March-July	56	
		c	April-Sept.	51	
0440	John Day, Middle Fork at Ritter	c	March-July	153	
		c	April-Sept.	131	
0375	Strawberry near Prairie City	c	March-July	8.2	
		c	April-Sept.	8.8	
	NOTE: FORECASTS BEGIN ON FEB. 1, 1968				

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Beech Creek Beech Creek-Fox-Long Cr. Bridge-Mountain Creeks Camas Creek Cherry Creek Indian-Pine Creeks John Day River, Main Fork John Day River, Mid. Fork John Day River, N. Fork John Day River, S. Fork Monument-Kimberly Strawberry Creek	Forecasts begin in the February 1 report which will be issued about February 10, 1968.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1968

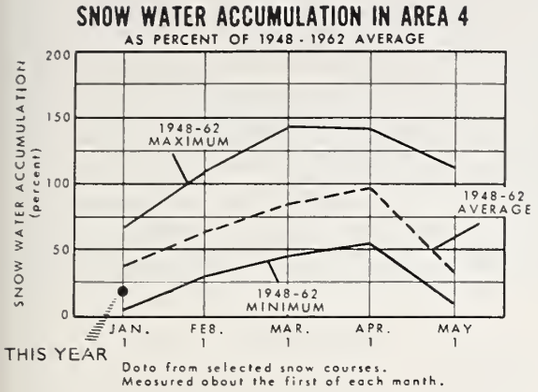
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE

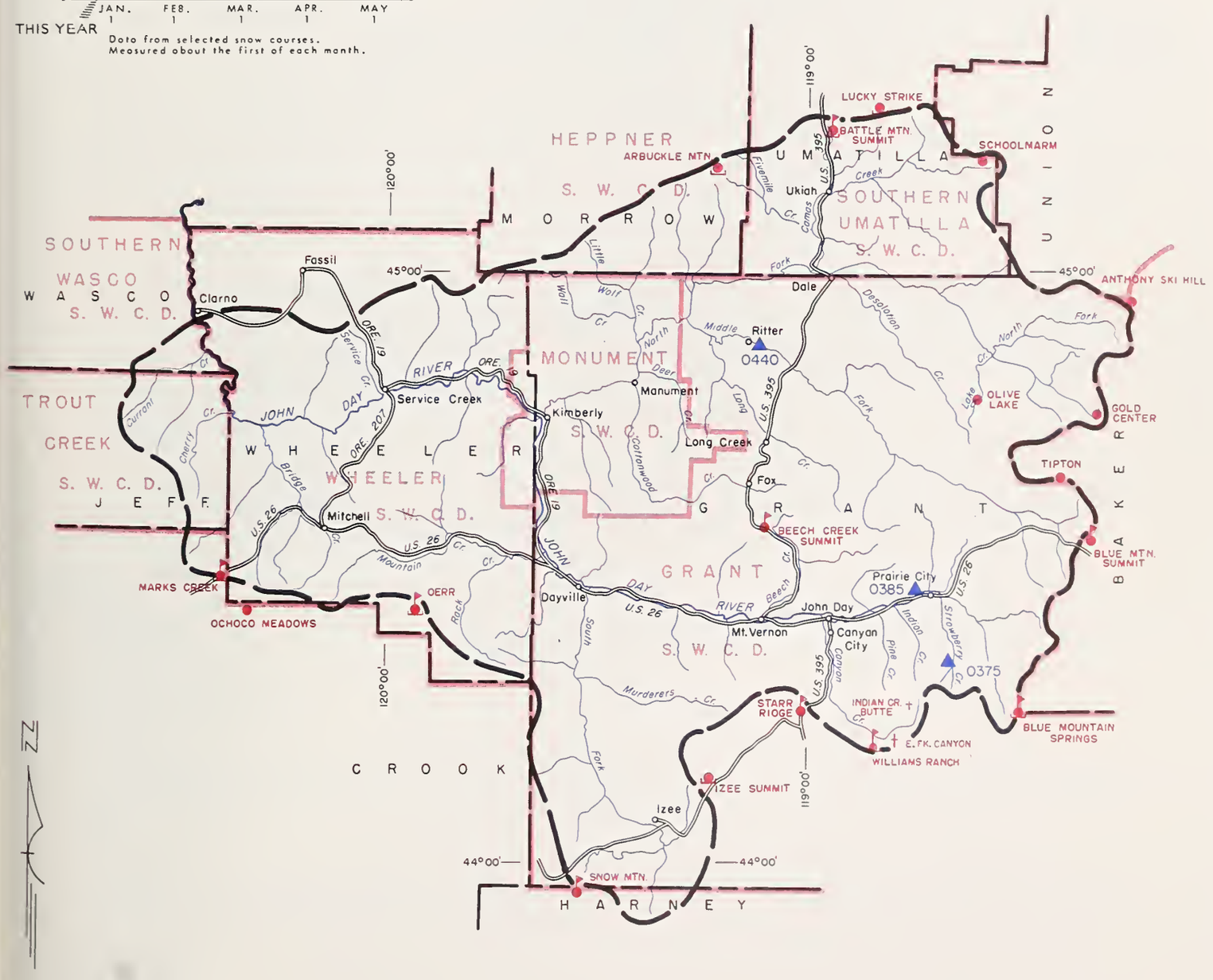
SOIL MOISTURE

STATION NAME	STATION ELEVATION	PROFILE (Inches) DEPTH	PROFILE (Inches) CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Battle Mtn. Summit	4340	48	13.8	12/21	10.9	12.7	10.9
Beech Creek	4800	48	21.3	1/2	9.4	11.3	8.2
Blue Mountain Springs	5900	42	16.9	12/28	7.2	7.8	6.6
Blue Mountain Summit	5100	36	16.8	12/28	9.9	9.9	8.5
Derr	5670	24	9.0	c			
Marks Creek	4540	36	14.1	12/29	8.9	11.4	9.5
Snow Mountain	6300	48	16.7	b			
Starr Ridge	5150	36	10.6	12/29	7.5	10.0	7.5
Williams Ranch	4500	42	17.9	b			

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER JOHN DAY WATERSHEDS





LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station
- Aerial Snow Depth Gage
- Precipitation Gage

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Anthony Lake	7125	12/29	26	9.2	13.9	11.9
Arbuckle Mountain	5400	c				
Battle Mountain Summit	4340	12/21	10	1.0	0.3	- -
Beech Creek Summit	4800	12/29	0	0.0	1.4	2.0 h
Blue Mountain Springs	5900	12/28	14	3.5	6.8	6.0 h
Blue Mountain Summit	5098	12/28	8	1.9	3.2	3.5
Derr	5670	c				
East Fork Canyon	5700	c				
Gold Center	5340	c				
Indian Creek Butte	6550	c				
Izee Summit	5293	12/29	6	1.6	3.8	3.1 h
Lucky Strike	5050	c				
Marks Creek	4540	12/29	4	1.7	0.3	1.4 m
Ochoco Meadows	5200	c				
Olive Lake	6000		DISCONTINUED			
Schoolmarm	4775	12/29	3	0.7	1.0	2.6 h
Snow Mountain	6300	c				
Starr Ridge	5150	12/29	3	0.8	2.5	2.4 h
Tipton	5100	12/28	10	2.2	3.8	4.9 h
Williams Ranch	4500	c				

"The Conservation of Water begins with the Snow Survey"

Area 5

WATER SUPPLY OUTLOOK
UPPER DESCHUTES, CROOKED WATERSHEDS
OREGON

as of

JANUARY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in the mid-state area of Crook, Jefferson and Deschutes Counties can expect less than the usual spring and summer water supplies in 1968. Mountain snowpacks and precipitation are below average; soil moisture is extremely low; and reservoired water supplies are discouragingly low in Crane Prairie and Wickiup Reservoirs.

SNOW COVER

Water content of the mountain snowpack on January first was about 70 percent of the 15-year average (1948-62) for that date. On Marks Creek Snow Course in the Ochoco country the snow is currently about 120 percent of the average and much deeper than last year.

PRECIPITATION

Fall precipitation has been about 98 percent of the average according to the U. S. Weather Bureau. Winter precipitation, up to January first, has been only 47 percent of the usual amount.

SOIL MOISTURE

Watershed soils under the snowpack are extremely dry at this time with moisture measuring only 63 percent of capacity.

RESERVOIR STORAGE

Storage in Ochoco and Prineville Reservoirs is 14,900 and 96,300 acre feet, respectively--slightly more than last year at this date. Crescent Lake held about 44,400 acre feet on January first compared with 50,000 acre feet a year ago.

Storage in Crane Prairie and Wickiup Reservoirs is 29,000 and 96,400 acre feet respectively--less than last year and only slightly more than in the very dry year of 1961.

STREAMFLOW

Flow of the Deschutes River at Moody has totaled 1,112,500 acre feet or 88 percent of the 15-year average since October first, according to preliminary data from the U. S. Geological Survey. Water managers in the Deschutes area are concerned about the unusually low flow of springs in the river's headwaters.

Much above average accumulation of snow in the remaining winter months will be needed if average water supplies are to be available in 1968.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Arnold Irrigation District Bear Creek Beaver Creek Camp Creek Central Ore. Irrig. Dist. Crooked River Deschutes River Hay-Trout Creeks Lone Pine Irrig. Dist. Mill Creek North Unit Irrig. Dist. Ochoco Creek Sisters Irrigation Dist. Snow Creek Irrigation Dist. Squaw Creek Irrig. Dist. Swalley Ditch Tumalo Project Walker Basin Irrig. Dist.	Forecasts begin in the February 1 report which will be issued about February 10, 1968	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Crane Prairie	55.3	29.0	30.1	37.1
Crescent Lake	86.9	44.4	50.0	41.5
Ochoco	47.5	14.9	12.6	17.5
Prineville	153.0	96.3	92.1	- -
Wickiup	200.0	96.4	106.3	135.5

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1968

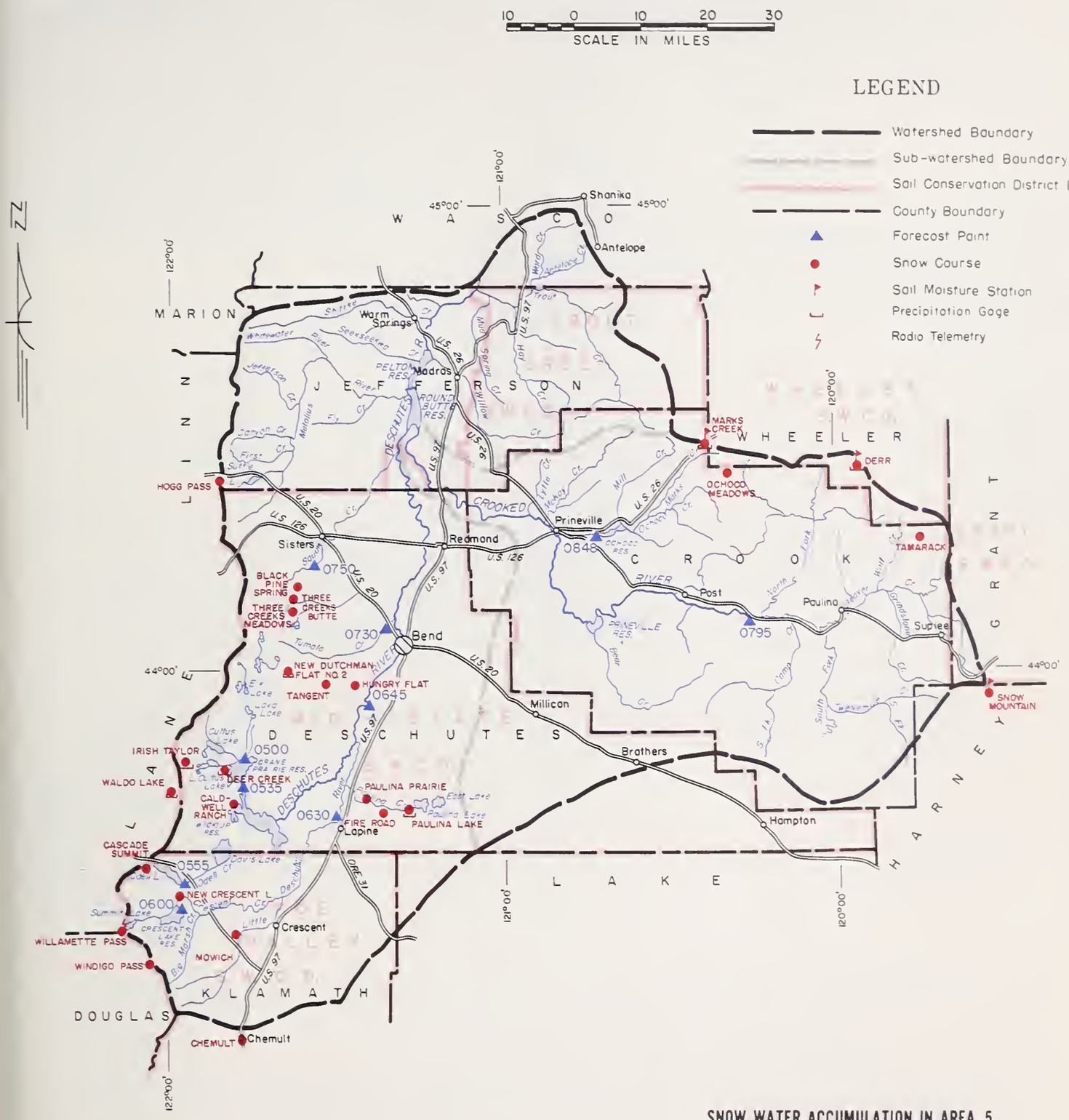
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
0535	Crane Prairie Reservoir total Inflow	[c]	April-Sept.	143	
0600	Crescent at Crescent Lake [d]	[c]	March-July	30	
		[c]	April-Sept.	33	
0795	Crooked near Post	[c]	Feb.-July	201	
		[c]	April-Sept.	125	
0645	Deschutes at Benham Falls [d]	[c]	April-July	417	
		[c]	April-Sept.	631	
0500	Deschutes below Snow Creek	[c]	Feb.-Sept.	89	
		[c]	April-Sept.	75	
0630	Deschutes, Little near Lapine [d]	[c]	Feb.-July	130	
		[c]	April-Sept.	113	
0848	Ochoco Reservoir net Inflow	[c]	Feb.-June	50	
		[c]	April-Sept.	32	
0555	Odell near Crescent	[c]	April-Sept.	34	
0750	Squaw near Sisters	[c]	April-Sept.	56	
0730	Tumalo near Bend [d]	[c]	April-Sept.	54	
	NOTE: FORECASTS BEGIN ON FEB. 1, 1968				

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Derr	5670	24	9.0	[c]			
Marks Creek	4540	36	14.1	12/29	8.9	11.4	9.5
Snow Mountain	6300	48	16.7	[b]			

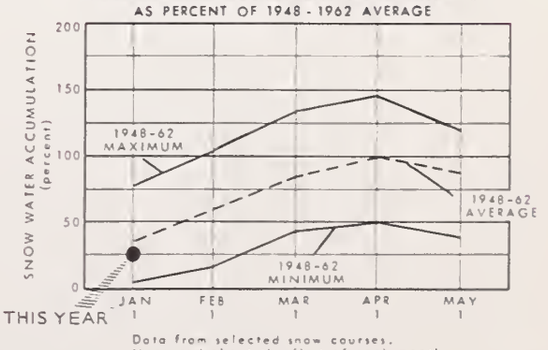
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 5

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Black Pine Spring	4600	c				
Caldwell Ranch	4400	c				
Cascade Summit	4880	1/2	28	8.7	9.8	13.2 h
Chemult	4760	12/27	16	4.3	3.9	4.8
Deer Creek	4554	c				
Derr	5670	c				
Fire Road	5050	c				
Hogg Pass	4755	1/2	35	11.3	12.5	16.6
Hungry Flat	4400	1/2	13	3.3	2.0	- -
Irish Taylor	5500	c				
Marks Creek	4540	12/29	4	1.7	0.3	1.4 m
Mowich	4700	c				
New Crescent Lake	4800	c				
New Dutchman Flat #2	6400	1/2	30	10.6	22.6	- -
Ochoco Meadows	5200	c				
Paulina Lake	6330	c				
Paulina Prairie	4285	c				
Snow Mountain	6300	c				
Tamarack	4800	c				
Tangent	5400	1/2	24	7.4	9.0	- -
Three Creeks Butte	5200	c				
Three Creeks Meadow	5650	c				
Waldo Lake	5500	c				
Willamette Pass	5600	c				
Windigo Pass	5800	c				

"The Conservation of Water begins with the Snow Survey"

Area 6

WATER SUPPLY OUTLOOK
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS
OREGON

as of

JANUARY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, Orchardists and other water users in Hood River and Wasco Counties can expect only fair water supplies this coming spring and summer if present trends continue.

SNOW COVER

Current snow surveys indicate that snow-stored water is only 59% of average compared to 78% at this time last year. Normally one-third of the total winter's snow accumulation has been received as of January 1, but this year's total to date is much below this figure.

PRECIPITATION

According to the U. S. Weather Bureau fall precipitation was 128 percent of average while winter precipitation up to January 1 was only 56 percent of average.

SOIL MOISTURE

Soil moisture conditions are drier than usual, although fall rains were above average. This will detract from the snow melt. These dry soils will absorb more than the usual amount of snowmelt water.

STREAMFLOW

Streams in the area were still flowing below normal amounts in December, which indicates that they have not yet recovered from the long, hot, dry summer.

Snowfall during the next several months will have to be much above average to bring the water supply outlook up to normal.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Aldridge Ditch (Tony Creek) Badger Creek Dee Irrigation District East Fork Irrig. Dist. Farmers Irrigation Dist. Hood River Irrig. Dist. Juniper Flat Middle Fork Irrig. Dist. Mile Creeks Mill Creek Mount Hood Irrig. Dist. Rock-Gate-Threemile Crs. Tygh Creek White River	Forecasts begin in the February 1 report which will be issued about February 10, 1968.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Clear Lake	11.9	0.0	1.3	- -

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1968

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
1210	Hood River near Hood River [d]	[c]	April-July	322	
		[c]	April-Sept.	381	
1185	Hood, West Fork near Dee	[c]	April-July	155	
		[c]	April-Sept.	179	
1015	White below Tygh Valley	[c]	April-July	158	
			April-Sept.	176	
	NOTE: FORECASTS BEGIN ON FEB. 1, 1968				

SNOW

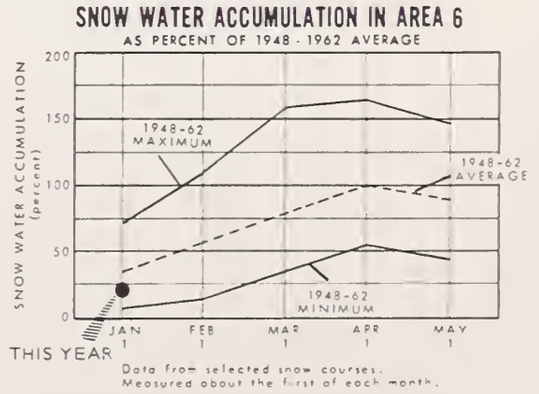
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) 1948-62 AVERAGE
Brooks Meadows	4300	[c]				
Clear Lake	3500	1/4	7	2.0	2.8	3.4 [h]
Clear Lake (Experimental)	3500	1/4	15	3.8	5.2	- -
Cooper Spur	3490	12/29	T	T	4.2	- -
Greenpoint Reservoir	3400	[c]				
Knebal Springs	3850	[c]				
Lambert Point	7000	[c]				
Parkdale	1770	12/29	0	0.0	0.0	- -
Phlox Point	5400	1/3	43	14.9	21.9	27.2
Red Hill	4400	[c]				
Still Creek	3670	1/3	22	5.8	7.2	10.8
Switchback	3255	[c]				
Tilly Jane	6000	[c]				
Ulrich Ranch Junction	3350	[c]				
Umbrella Falls	5400	1/2	48	15.4 [j]	23.7	- -
Upper Valley	2530	12/29	0	0.0	T	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- ● Snow Course
- † Aerial Snow Depth Gage
- ⚑ Soil Moisture Station
- ⊔ Precipitation Gage
- ⚲ Temperature Gage
- ϟ Radio Telemetry



Area 7

WATER SUPPLY OUTLOOK
LOWER COLUMBIA WATERSHEDS
OREGON

as of

JANUARY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Even with a deficient early-season snowpack, the water supply outlook for major irrigated areas along the Columbia and its principal tributaries is mostly satisfactory for 1968. Oregon will have below average water supplies in some areas.

Streamflow was high on upper Columbia watersheds in 1967 and near average on Snake River tributaries. Reservoir storage carryover is above average in most reservoirs.

SNOW COVER

Early-season snowpack ranges near three-quarters of the average for January first with deviations of ten to fifteen percent. Snowpacks as low as 50 per cent occur in portions of Oregon. A heavy storm near January first brought snow up to about 125 percent average on Clark Fork in Montana.

SOIL MOISTURE

Soil moisture conditions at both mountain and valley elevations are close to average or below average for this date. Most Oregon watersheds have not recovered from the hot, dry summer and fall and soils are still very dry.

STREAMFLOW

Flow of the Columbia River at The Dalles, Oregon, as reported by the U. S. Geological Survey, has been slightly below average for the fall months. The record by months for the 1968 water year is as follows:

Month	Percent of Average Discharge (1948-62)
October	96 (Adjusted for storage)
November	99 " " "
December	88 " " "

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1968

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
1057	Columbia at The Dalles	c	April-June	74,100	
		c	April-Sept.	108,500	

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW[d] (1,000 A.F.) APR. — SEPT.	APR. — JUNE	MAY — JUNE	PEAK (1,000 c.f.s)	DATE
1943	115,000	75,300	52,400	541	June 21
1944	61,900	39,200	32,100	326	June 19
1945	81,600	54,600	47,300	505	June 8
1946	108,100	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,400	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1948-62 Avg.	108,500	74,100	60,200	633	
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s)	DRAINAGE DISTRICT PUMPHOUSE SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES 118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

LOWER COLUMBIA WATERSHEDS

WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- (50) River Miles
- Snow Course
- Temperature
- Radio Telemetry

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
WILLAMETTE WATERSHEDS
OREGON

as of

JANUARY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers and other water users in the Willamette Valley can expect less than the usual spring and summer water supplies in 1968. Mountain snowpacks and precipitation are much below average; soil moisture is relatively low; and reservoired water supplies are about at their usual level for the first of the new year.

SNOW COVER

Water content of the mountain snowpack on January first was about 67 percent of the 15-year average (1948-62). Snow cover on the Coast Fork of the Willamette was 112 percent of average and on the McKenzie it was 68 percent of the average.

PRECIPITATION

Fall precipitation has been about 122 percent of the average according to the U. S. Weather Bureau. Winter precipitation, up to January first, has been only 60 percent of the usual amount.

SOIL MOISTURE

Accumulation of moisture in the soil profile on upper watersheds has not equalled the usual amounts, probably due to the excessively dry and hot summer and fall of last year.

RESERVOIR STORAGE

Most reservoirs in the Willamette Basin are currently at low levels in accordance with the usual operating plans which provide for interception of large amounts of flood water at this time of winter.

STREAMFLOW

Flow of the Middle Fork of the Willamette above Lookout Point Reservoir has totaled only 290,500 acre feet or 52 percent of the 15-year average (1948-62) since October first according to preliminary data from the U. S. Geological Survey.

Much above average snow accumulation must occur in the remaining winter months if average water supplies are to be available in 1968.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Foir" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Calapooya Clackamas McKenzie Molalla Santiam, North Santiam, South Willamette, Coast Fork Willamette, Middle Fork	Forecasts begin in the February 1 report which will be issued about February 10, 1968.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cottage Grove	30.0*	0.0	0.0	1.3
Cougar	155.2*	0.0	0.0	- -
Detroit	299.9*	12.5	0.0	38.0[m]
Dorena	70.5*	0.0	0.9	6.5[m]
Fall Creek	115.0*	0.0	0.1	- -
Fern Ridge	94.2*	0.1	0.1	8.7
Foster	30.0*	1.0	- -	- -
Green Peter	270.0*	5.4	- -	- -
Hills Creek	200.0*	0.4	0.0	- -
Lookout Point	337.2*	1.0	0.0	63.3
Timothy Lake	61.7	53.1	46.7	40.2

*Multiple purpose reservoir--space reserved primarily for flood runoff.

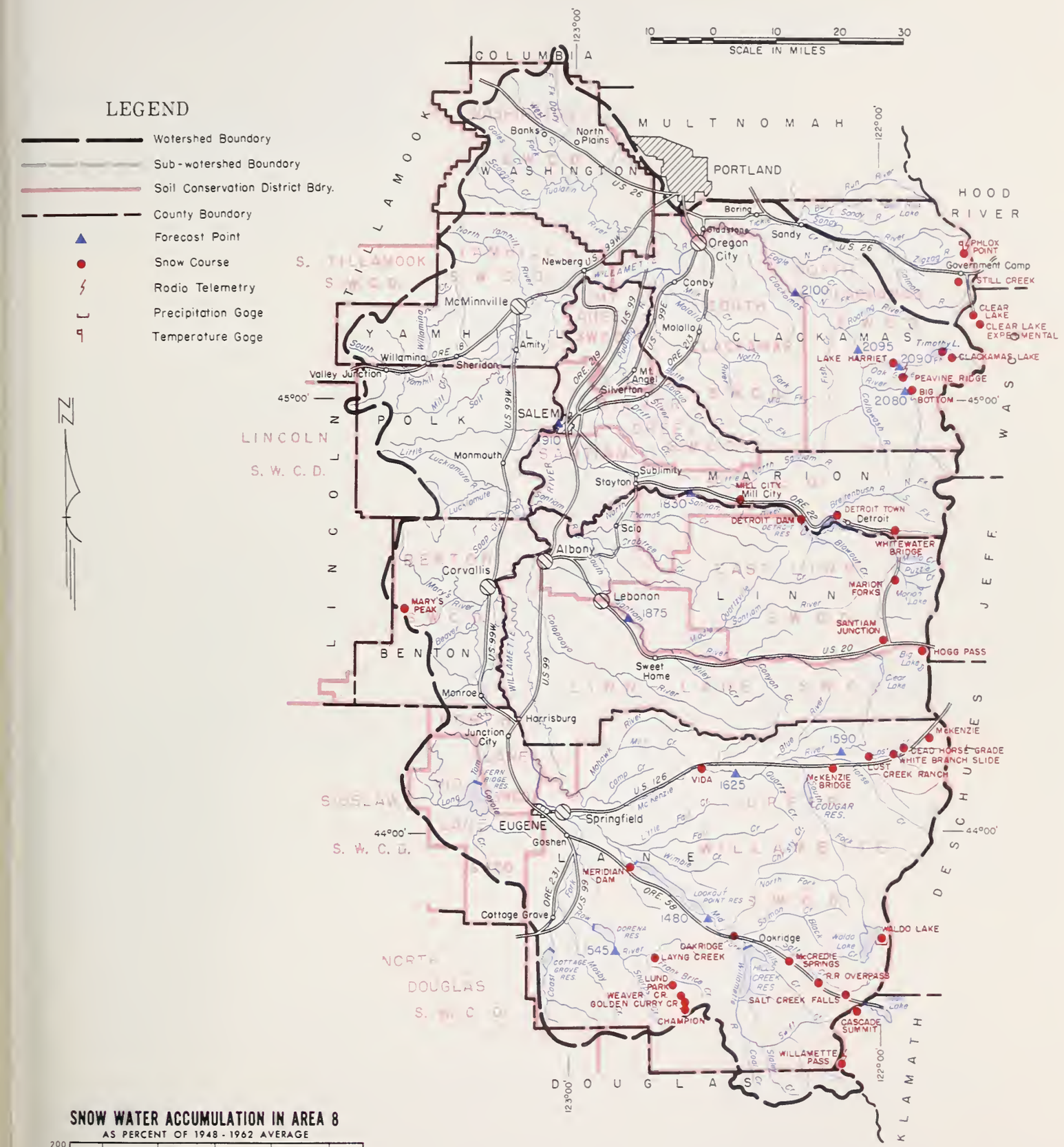
STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1968

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
2080	Clackamas at Big Bottom	c	April-July	150	
		c	April-Sept.	184	
2100	Clackamas at Estacada	c	April-July	770	
		c	April-Sept.	890	
2095	Clackamas above Three Lynx	c	April-July	584	
		c	April-Sept.	683	
1590	McKenzie at McKenzie Bridge	c	April-July	502	
		c	April-Sept.	658	
1625	McKenzie near Vida	c	April-July	1144	
		c	April-Sept.	1392	
2090	Oak Grove Fork above Power Intake	c	April-July	147	
		c	April-Sept.	190	
1545	Row near Dorena	c	April-July	108	
		c	April-Sept.	112	
1830	Santiam, North at Mehama	c	April-July	884	
		c	April-Sept.	991	
1875	Santiam, South at Waterloo	c	April-July	637	
		c	April-Sept.	675	
1840	Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge	c	April-July	863	
		c	April-Sept.	968	
1910	Willamette at Salem	c	April-July	5040	
		c	April-Sept.	5566	

NOTE: FORECASTS BEGIN ON FEB. 1, 1968

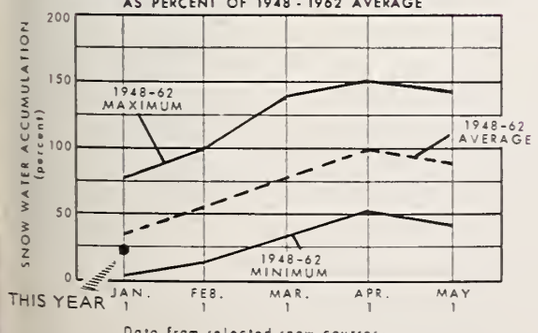
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WILLAMETTE WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 8

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month

SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	CURRENT INFORMATION: SNOW DEPTH (Inches)	CURRENT INFORMATION: WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	PAST RECORD: WATER CONTENT (Inches) 1948-62 AVERAGE
Big Bottom	2118	[b]				
Cascade Summit	4880	1/2	28	8.7	9.8	13.2[h]
Champion	4500	1/2	41	12.8	9.5	9.3[h]
Clackamas Lake	3400	[c]				
Clear Lake	3500	1/4	7	2.0	2.8	3.4[h]
Clear Lake (Experimental)	3500	1/4	15	3.8	5.2	- -
Dead Horse Grade	3800	1/3	22	6.2	6.4	8.8[h]
Detroit Town	1610	1/2	0	0.0	0.0	0.3[h]
Detroit Dam	1580	1/2	0	0.0	0.0	0.3[h]
Golden Curry Creek	3136	1/2	9	2.5	0.0	3.2[h]
Hogg Pass	4755	1/2	35	11.3	12.5	16.6
Lake Harriet	2045	[b]				
Layng Creek	1200	1/2	0	0.0	0.0	0.0
Lost Creek Ranch	1956	1/3	7	1.9	0.0	1.2[h]
Lund Park	1740	1/2	0	0.0	0.0	0.8[h]
Marion Forks	2730	1/2	16	5.4	3.8	5.5
Marys Peak	3620	[c]				
McCredie Springs	2120	1/2	T	T	0.0	0.3[h]
McKenzie	4800	1/3	36	11.4	13.4	22.2[h]
McKenzie Bridge	1372	1/3	0	0.0	0.0	0.1[h]
Meridian Dam	750	1/2	0	0.0	0.0	0.0[h]
Mill City	826	1/2	0	0.0	0.0	0.0[h]
Oakridge	1310	1/2	0	0.0	0.0	T[h]
Peavine Ridge	3500	[c]				
Phlox Point	5400	1/3	43	14.9	21.9	27.2
Railroad Overpass	2750	1/2	T	T	0.0	1.0[h]
Salt Creek Falls	4000	1/2	23	6.5	6.2	6.0[h]
Santiam Junction	3990	1/2	30	9.5	7.2	9.8
Still Creek	3670	1/3	22	5.8	7.2	10.8
Timothy Lake	3295	[b]				
Vida	800	1/3	0	0.0	0.0	0.0[h]
Waldo Lake	5500	[c]				
Weaver Creek	2440	1/2	T	T	0.0	0.3
White Branch Slide	2800	1/3	16	4.6	T	3.1[h]
Whitewater Bridge	2175	1/2	7	2.3	0.0	2.7[h]
Willamette Pass	5600	[c]				
RADIO REPORT by AUTOMATIC-SNOW-MEASURING STATION						
			Time			
Cold Springs Camp	6100	1/2	0800			
Irish-Taylor	5500	1/2	0800	7.1	- -	- -
Peavine	3500	1/2	0800	4.6	- -	- -
Phlox Point	5400	1/2	0800	14.8	19.7	- -
Willamette Pass	5600	1/2	0800			

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
ROGUE, UMPQUA, WATERSHEDS
OREGON

as of

JANUARY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in the Rogue-Umpqua area can expect slightly less than the usual water supplies during the spring and summer of 1968. Mountain snowpacks average close to the usual water content, the soil profile is drier than usual and reservoir water supplies are lower than last year, except in Howard Prairie Reservoir where the storage is about average.

SNOW COVER

Water content of the mountain snowpack on January first was about 95 percent of the 15-year average (1948-62). Snow on the higher elevations is below average and on the lower elevations it is above average.

PRECIPITATION

Fall precipitation has been about 88 percent of the average, according to the U. S. Weather Bureau. Winter precipitation, up to January first, has been only 68 percent of the usual amount.

SOIL MOISTURE

Accumulation of moisture in the soil profile on the upper watersheds has not equalled the usual amounts due to excessive dryness and below average fall precipitation.

RESERVOIR STORAGE

Water stored in Fish Lake and Fourmile Lake Reservoirs was estimated at about 3,000 acre feet in each on December first.

These figures have probably increased but very little during December, with present storage estimated at about half of the usual amount held on January 1.

Howard Prairie, Hyatt Prairie and Emigrant Lake Reservoirs held about 64,300 acre feet on January first compared with 61,600 acre feet on this date last year.

STREAMFLOW

Flow of the Rogue River at Raygold has totaled only 248,200 acre feet since October first compared with 504,700 acre feet for the same period last year. Similarly, the flow of the Umpqua at Elkton has totaled 631,700 acre feet since October first compared with 1,740,000 acre feet last year.

Neither of these streams has recovered from the hot, dry summer and fall of last year. It is questionable that we will get enough extra snow this winter season to bring the flow of these two streams up to average in 1968.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Althouse Creek Applegate River, Big Applegate River, Little Ashland Creek Butte Creek, Big Butte Creek, Little Cow Creek Deer Creek Elk Creek Emigrant Creek (abv. Res.) Evans Creek Gold Hill Irrigation Dist. Grants Pass Irrig. Dist. Grave Creek Illinois River, East Fork Illinois River, West Fork Jump-off-Joe Creek Neil Creek Red Blanket Creek Rogue River Sucker Creek Table Rock Irrig. Dist. Thompson Creek Wagner Creek Williams Creek	Forecasts begin in the February 1 report which will be issued about February 10, 1968.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Emigrant Gap	39.0	14.8	19.3	17.8*
Fish Lake	7.8	2.9**	*b*	4.7
Fourmile Lake	16.1	2.7**	*b*	7.9
Howard Prairie	60.0	40.8	32.6	- -
Hyatt Prairie	16.1	8.7	9.7	6.4

*Average for years of record after reconstruction.

**Dec. 1

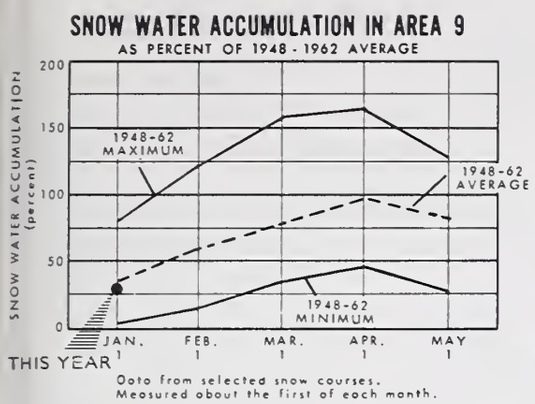
STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1968

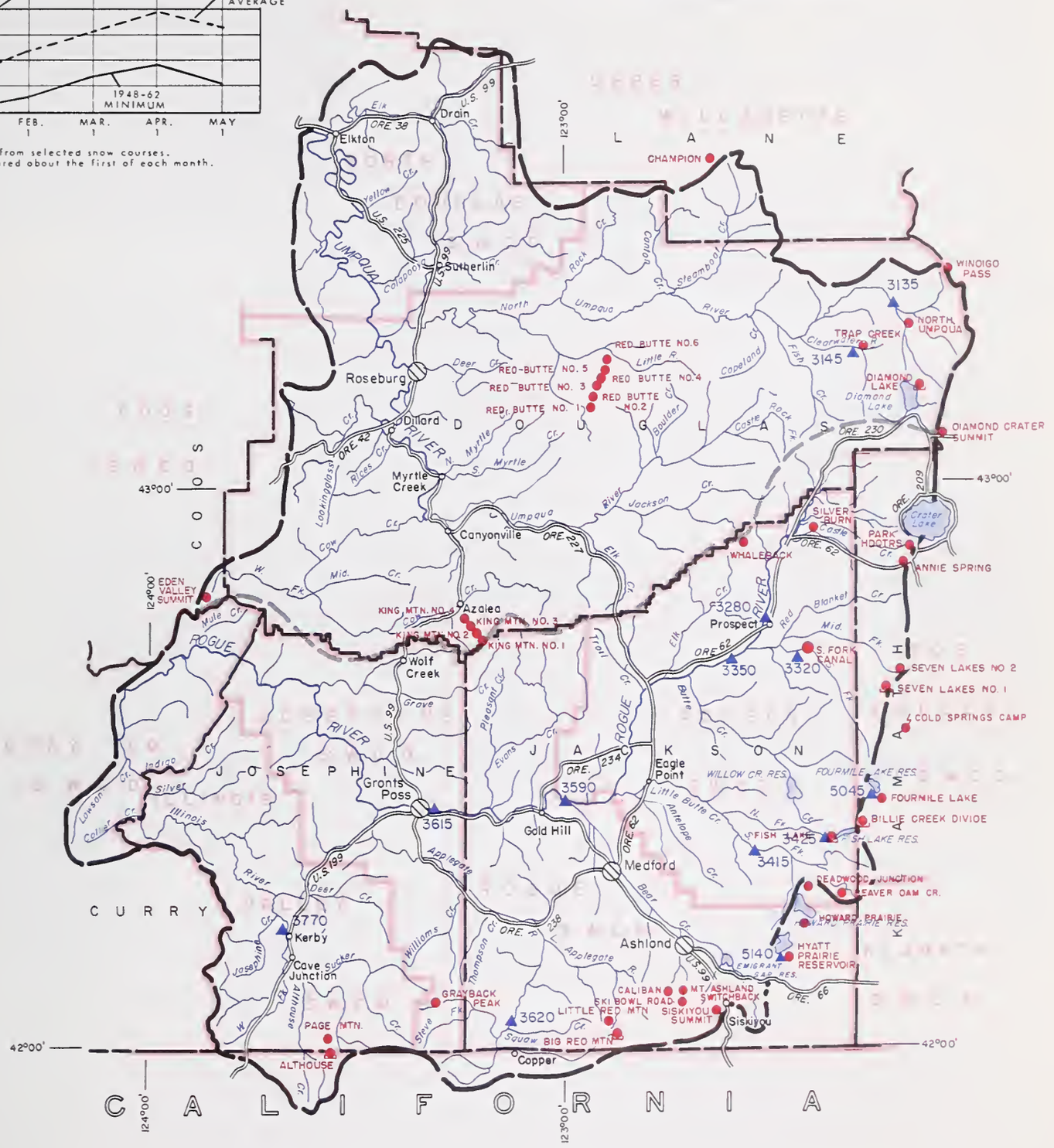
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
3620	Applegate near Copper	*c*	April-Sept.	142	
3145	Clearwater above Trap Creek[d]	*c*	April-Sept.	75	
5045	Fourmile Lake net Inflow[d]	*c*	April-Sept.	5.3	
		c	Feb.-Sept.	6.4	
5140	Hyatt Reservoir net Inflow[d]	*c*	April-Sept.	5.8	
3771	Illinois River near Kerby	*c*	March-July	348	
		c	April-Sept.	212	
3425	Little Butte, N. Fk. at Fish Lake nr. Lake Cr.[d]	*c*	April-Sept.	16.0	
3415	Little Butte, S. Fork near Lake Creek	*c*	April-July	38	
	Note: Minimum flow will drop to 100 c.f.s. by *c*.				
3280	Rogue below South Fork	*c*	April-July	295	
3320	Rogue, South Fork near Prospect[d]	*c*	April-July	70	
		c	April-Sept.	82	
3350	Rogue below South Fork	*c*	April-July	611	
		c	April-Sept.	754	
3590	Rogue at Raygold near Central Point	*c*	April-July	837	
		c	April-Sept.	1001	
3615	Rogue at Grants Pass	*c*	April-Sept.	993	
3135	Umpqua, No. blw. Lemolo Res. nr. Toketee Falls[d]	*c*	April-Sept.	186	

NOTE: FORECASTS BEGIN ON FEB. 1, 1968

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

ROGUE, UMPQUA WATERSHEDS





LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- Precipitation Gage
- Radio Telemetry

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Althouse	4530	c				
Annie Spring	6018	12/29	41	12.7	16.3	16.6
Beaver Dam Creek	5100	12/30	24	7.6	5.5	- -
Big Red Mountain	6500	c				
Billie Creek Divide	5300	12/27	28	8.0	8.8	9.6 h
Caliban	6500	c				
Champion	4500	1/2	41	12.8	9.5	9.3 h
Cold Springs Camp	6100	c				
Deadwood Junction	4600	12/30	19	5.8	3.7	- -
Diamond Crater Summit	5800	12/26	27	8.3	11.5	- -
Diamond Lake	5315	12/26	26	7.2	5.8	10.0
Fish Lake	4865	b				
Fourmile Lake	6000	c				
Grayback Peak	6000	c				
Howard Prairie	4500	12/30	21	5.9	4.7	- -
Hyatt Prairie Reservoir	4900	12/30	18	5.6	3.1	3.7 h
King Mountain #1	4500	12/27	30	11.5	- -	- -
King Mountain #2	4000	12/27	29	9.5	- -	- -
King Mountain #3	3648	12/27	12	3.5	- -	- -
King Mountain #4	3049	12/27	0	0.0	- -	- -
King Mountain #5	2380	12/27	0	0.0	- -	- -
King Mountain #6	1820	12/27	T	T	- -	- -
Little Red Mountain	6500	c				
Mt. Ashland Switchback	6400	c				
North Umpqua	4215	12/28	19	4.9	4.2	6.7 h
Page Mountain	4045	c				
Park Headquarters	6450	12/29	41	13.6	23.4	22.2
Red Butte #1	4560	12/20	50	14.6	- -	- -
Red Butte #2	4000	12/20	37	12.8	- -	- -
Red Butte #3	3500	12/20	32	4.9	- -	- -
Red Butte #4	3000	12/20	24	4.2	- -	- -
Red Butte #5	2500	12/20	18	3.3	- -	- -
Red Butte #6	2000	12/20	14	2.3	- -	- -
Seven Lakes #1	6800	c				
Seven Lakes #2	6200	c				
Silver Burn	3720	12/31	30	7.7	4.0	5.0
Siskiyou Summit	4630	12/30	21	7.2	1.6	3.0
Ski Bowl Road	6000	c				
South Fork Canal	3500	12/31	11	3.2	T	1.6
Trap Creek	3800	12/28	15	5.1	3.6	3.8 h
Whaleback	5140	c				
Windigo Pass	5800	c				

WATER SUPPLY OUTLOOK
KLAMATH WATERSHEDS
OREGON

as of

JANUARY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in Klamath County can expect fair to average water supplies this spring and summer. Snow accumulation and reservoir storage are the bright spots in the picture, both being close to average for January 1; detracting will be dry soils and low winter streamflows.

SNOW COVER

The snowpack in Klamath County is about average for this time of year. Below average amounts of snow were measured at higher elevations while above average measurements were taken at the lower elevation snow courses. About one-third of the total annual snow accumulation is normally received by January 1, and this years total compares favorably.

PRECIPITATION

According to the U. S. Weather Bureau, precipitation in Klamath County was 67 percent of average for the fall months and is only 55 percent of average for the winter period up to January 1.

SOIL MOISTURE

Soils are drier in the area than they were last year. Soils at the Bly Mountain station have a moisture content 60 percent of capacity as compared to 68% last year. These dry soils will absorb about 4 inches from the snowmelt--water that otherwise would add to streamflow.

RESERVOIR STORAGE

Stored water supplies in Klamath County reservoirs total about 97% of the average for this time of year. Clear Lake's January 1 contents were 181,100 acre feet or 103% of average, Gerber was holding 44,700 acre feet or 169% of average, and Upper Klamath was storing 88% of its January 1 average or 288,000 acre feet.

STREAMFLOW

The inflow to Upper Klamath remained low at 67% of average during December. Inflow for the water year up to January 1 was 74%. These figures indicate that streams in the area have still not recovered from the long, hot, dry summer of 1967.

Taking all factors into consideration snowfall will have to be above average during the next several months to assure average water supplies for 1968.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Ft. Klamath Valley Lost River (Clear Lake) Lost River (Gerber) Lost River (Willow Res.) Sprague River Upper Klamath Lake Williamson River	Forecasts begin in the February 1 report which will be issued about February 10, 1968.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Clear Lake	440.2	181.1	169.1	175.7
Gerber	94.0	44.7	36.2	26.4 [m]
Upper Klamath Lake	584.0	288.0	321.8	328.4

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.) as of January 1, 1968

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE [i]
NO.	NAME				
923	Clear Lake Reservoir Inflow [k]	c	Feb.-June	98	
8215	Gerber Reservoir Inflow [k]	c	Feb.-June	48	
5010	Sprague near Chiloquin	c	Feb.-Sept.	390	
			April-Sept.	289	
5070	Upper Klamath Lake net Inflow [k]	c	Feb.-Sept.	1002	
			April-Sept.	639	
5025	Williamson below Sprague River	c	Feb.-Sept.	683	
			April-Sept.	490	

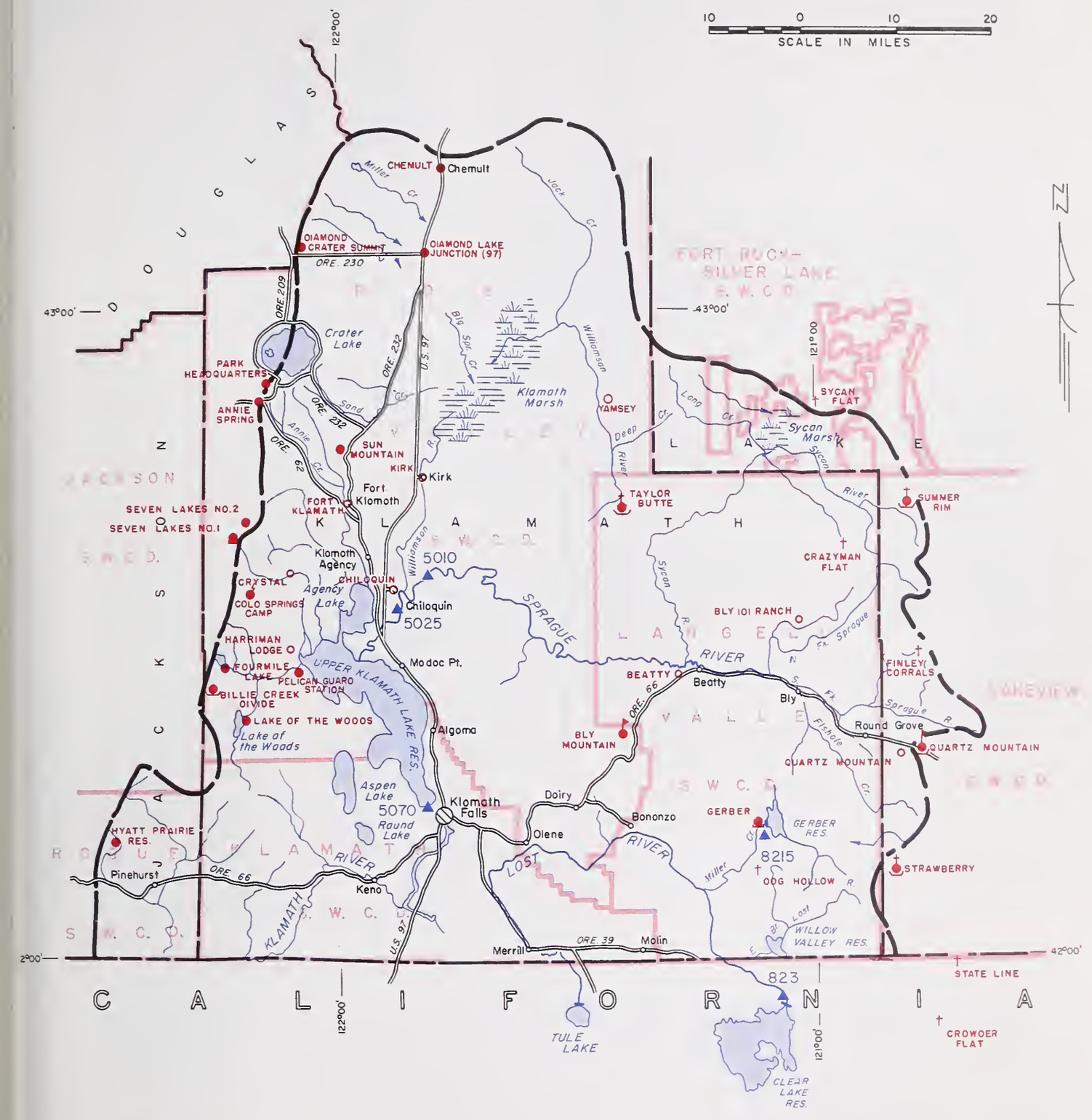
NOTE: FORECASTS BEGIN ON FEB. 1, 1968

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Bly Mountain	5090	42	14.0	12/21	8.4	9.5	- -

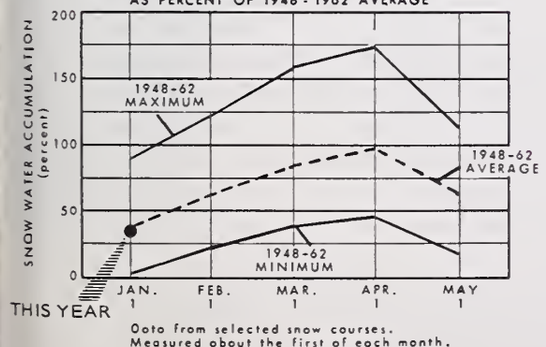
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

KLAMATH WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 10

AS PERCENT OF 1948 - 1962 AVERAGE



Ooto from selected snow courses.
Measured about the first of each month.

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- COPCO Snow Station
- Soil Moisture Station
- Precipitation Gage
- Radio Telemetry

OR-10c

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Annie Spring	6018	12/29	41	12.7	16.3	16.6
Beatty (PP&L)	4300	12/28	7	2.2	T	0.2
Billie Creek Divide	5300	12/27	28	8.0	8.8	9.6 [h]
Bly Mountain	5090	12/22	19	4.4	2.8	2.7 [m]
Bly 101 Ranch (PP&L)	4800	12/30	9	1.8	0.0	0.9
Chemult	4760	12/27	16	4.3	3.9	4.8
Chiloquin (PP&L)	4187	12/29	5		0.8	0.9
Cold Springs Camp	6100	[c]				
Crazyman Flat	6100	[c]				
Crowder Flat (Calif.)	5200	[c]				
Crystal (PP&L)	4200	12/24	20	4.0	3.4	4.2
Diamond-Crater Summit	5800	12/26	27	8.3	11.5	- -
Diamond Lake Junction (97)	4600	12/26	15	3.5	1.9	- -
Dog Hollow	4900	[c]				
Finley Corrals	6000	[c]				
Fort Klamath (PP&L)	4150	12/29	12	3.2	1.4	1.5
Fourmile Lake	6000	[c]				
Gerber	4850	12/28	4	0.4 [g]	T	1.6 [h]
Harriman (PP&L)	4200	12/30	15		1.7	2.0
Hyatt Prairie Reservoir	4900	12/30	18	5.6	3.1	3.7 [h]
Kirk (PP&L)	4533	12/30	20	5.2	- -	3.2
Lake of the Woods	4960	[b]				
Park Headquarters	6450	12/29	41	13.6	23.4	22.2
Pelican Guard Station	4150	12/27	14	3.5	1.6	- -
Quartz Mountain	5320	12/27	16	3.7	3.1	3.0 [h]
Quartz Mountain (PP&L)	5504	12/27	17	4.2	- -	3.2 [m]
Seven Lakes #1	6800	[c]				
Seven Lakes #2	6200	[c]				
State Line (Calif.)	5750	[c]				
Strawberry	5760	[c]				
Summer Rim	7200	[c]				
Sun Mountain	5350	12/28	26	7.4	7.5	10.4
Sycan Flat	5500	[c]				
Taylor Butte	5100	12/21	16	3.0	3.9	2.2 [m]
Yamsey (PP&L)	4600	[b]				

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
LAKE COUNTY, GOOSE LAKE WATERSHEDS
OREGON

as of

JANUARY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Ranchers, farmers and other water users in Lake County can expect near average water supplies in the spring and summer of 1968. Snow cover is above average for January first, but precipitation and soil moisture are much below average. Stored water supplies are above the usual levels for this date.

SNOW COVER

Water content of the mountain snowpack is about 123 percent of the 15-year average (1948-62) for January first, and is about 50 percent greater than a year ago. All of this snow and more will be needed for a satisfactory water supply in 1968.

PRECIPITATION

Fall precipitation is about 88 percent of the average according to the U. S. Weather Bureau. Winter precipitation up to January first has been only 53% of the average.

SOIL MOISTURE

Moisture in the soils of the upper watersheds under the snowpack is only 54 percent of capacity. This is the driest condition that has been recorded since measurements began in 1961.

RESERVOIR STORAGE

Stored water supplies in Drews Valley Reservoir total about 35,100 acre feet on January first compared with only 25,000 acre feet last year on this date. Cottonwood Reservoir holds a little more than 7000 acre feet, the same figure as for last year on this date.

STREAMFLOW

Streams in Lake County have been flowing at below average rates indicating that they still have not completely recovered from the long, hot and dry summer.

Above average snowfall is needed during the next several months to bring the water supply outlook up to average.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Chewaucan Crooked Creek Deep Creek Dry Creek East Side Goose Lake Guano Lake Honey Creek Lakeview Water Users Assn. Rock Creek (Hart Mtn.) Silver-Buck Creeks Summer Lake Thomas Creek Twentymile Creek Warner Lakes	Forecasts begin in the February 1 report which will be issued about February 10, 1968.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cottonwood	8.7	0.7**	0.7	2.1*
Drews	63.0	35.1	25.0	29.4
Thompson Valley	19.5	17.0[e]	- -	- -

*Average for years of record after reconstruction.

**Dec. 1

[e]Est.

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1968

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
3840	Chewaucan near Paisley	c	March-June	89	
3715	Deep above Adel	c	March-June	78	
3385	Drews Reservoir net Inflow[d]	c	March-July	47	
3785	Honey Creek near Plush	c	March-June	18.0	
3900	Silver Creek near Silver Lake	c	March-July	21	
3660	Twentymile near Adel	c	March-June	28	

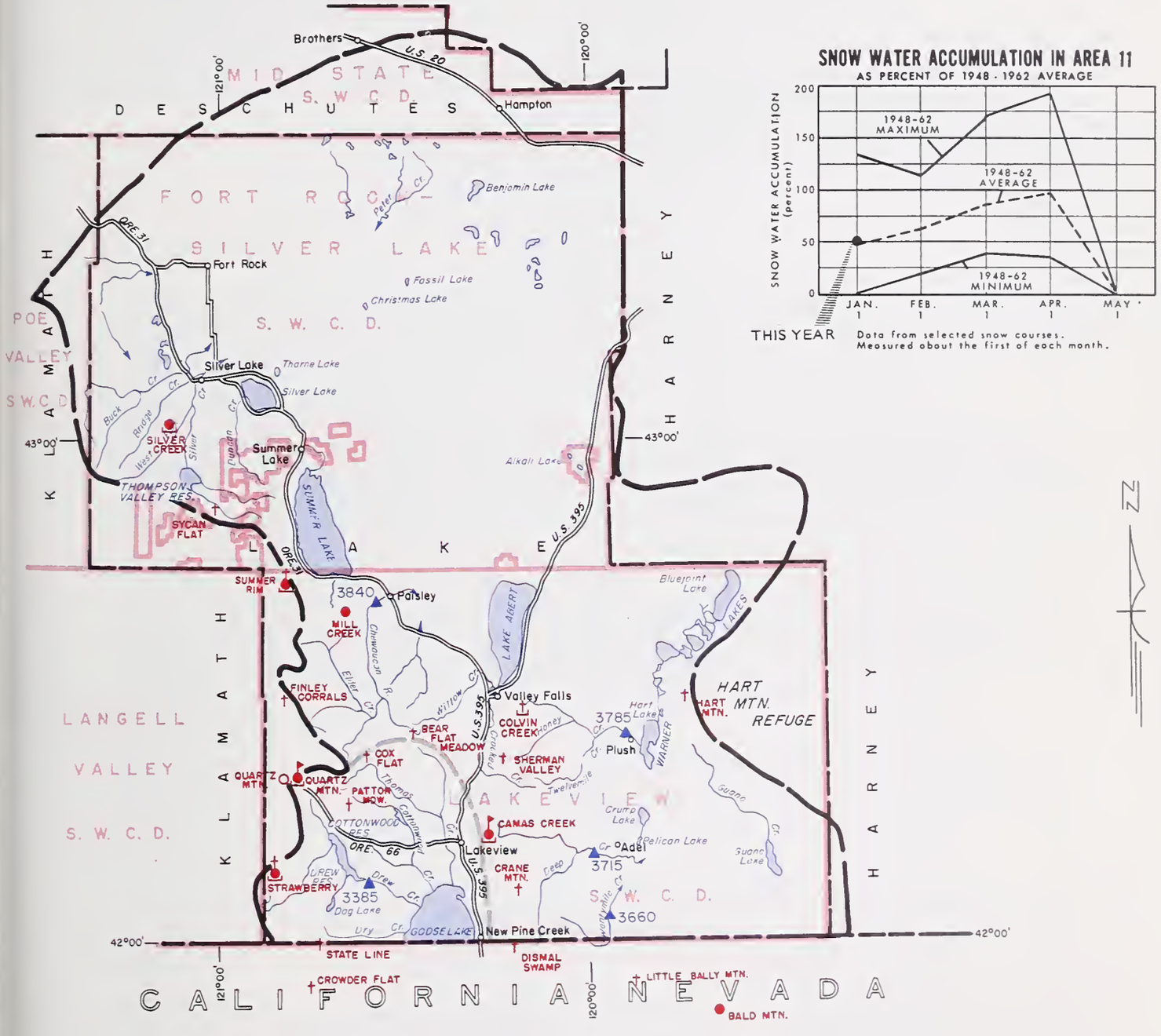
NOTE: FORECASTS BEGIN ON FEB. 1, 1968

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Camas Creek	5720	42	14.5	12/30	9.7	11.8	11.4
Quartz Mountain	5320	48	15.3	12/27	6.4	8.2	7.2

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

LAKE COUNTY, GOOSE LAKE WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 11

AS PERCENT OF 1948 - 1962 AVERAGE

Data from selected snow courses.
Measured about the first of each month.

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- COPCO Snow Station
- Soil Moisture Station
- Precipitation Gage

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Adin Mountain (Calif.)	6350	c				
Bald Mountain (Nev.)	6720	c				
Bear Flat Meadow	5900	c				
Camas Creek	5720	12/30	15	3.9	2.7	- -
Cedar Pass (Calif.)	7100	c				
Colvin Creek	6550	c				
Cox Flat	5750	c				
Crane Mountain	6020	c				
Crowder Flat (Calif.)	5200	c				
Dismal Swamp (Calif.)	7000	c				
Finley Corrals	6000	c				
Hart Mountain	6350	c				
Little Bally Mountain (Nev.)	6600	c				
Mill Creek	6200	c				
Patton Meadows	6800	c				
Quartz Mountain (PP&L)	5504	12/27	17	4.2	- -	3.2 m
Quartz Mountain	5320	12/27	16	3.7	3.1	3.0 h
Sherman Valley	6600	c				
Silver Creek	4900	12/27	8	1.8	0.6	1.9 h
State Line (Calif.)	5750	c				
Strawberry	5760	c				
Summer Rim	7200	c				
Sycan Flat	5500	c				

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
HARNEY BASIN WATERSHEDS
OREGON

as of

JANUARY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in Harney County can expect only fair water supplies this spring and summer. Snow accumulation, precipitation and dry soils are all pointing to below average streamflows this year.

SNOW COVER

Scattered measurements in the county indicate a snowpack of 52 percent of the average. Normally one-third of the total winter's accumulation is on the ground by January 1, but this year's January 1 total is much below this figure.

PRECIPITATION

According to the U. S. Weather Bureau, precipitation for the fall months was 95 percent of average, and precipitation for the winter period up to January 1 has been only 49 percent of average.

SOIL MOISTURE

Soil moisture stations in the North half of the county indicate soils much drier than last year and at only 52 percent of capacity. This compares closely with conditions of two years ago.

STREAMFLOW

Streams in Harney County have been flowing below average amounts, indicating that they still have not completely recovered from the long, hot, dry summer.

Above average snowfall is needed during the next several months in order to bring the outlook up to average.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Catlow Valley Cow Creek Donner und Blitzen River Mill-Coffeepot Creeks Rattlesnake Creek Silver Creek Silvies River Soldier-Prather Creek Trout Creek Whitehorse Creek	Forecasts begin in the February 1 report which will be issued about February 10, 1968.	

RESERVOIR STORAGE (1,000 Ac. Ft.) January 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of January 1, 1968

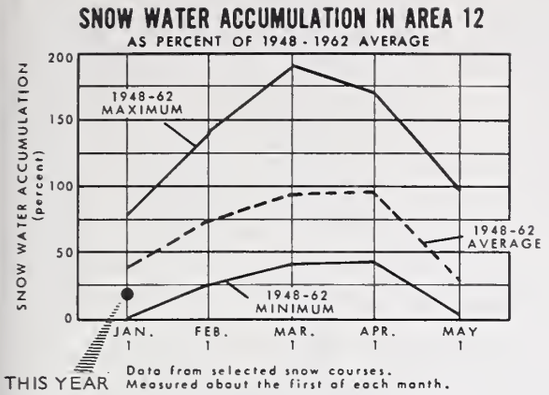
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
3960	Donner und Blitzen near Frenchglen	c	March-June	59	
			April-Sept.	62	
4030	Silver near Riley	c	April-July	22	
3935	Silvies River near Burns	c	March-June	116	
			April-Sept.	99	
4065	Trout Creek near Denio	c	March-July	8.7	
			April-Sept.	8.4	
	NOTE: FORECASTS BEGIN ON FEB. 1, 1968				

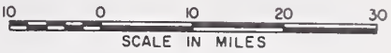
SOIL MOISTURE

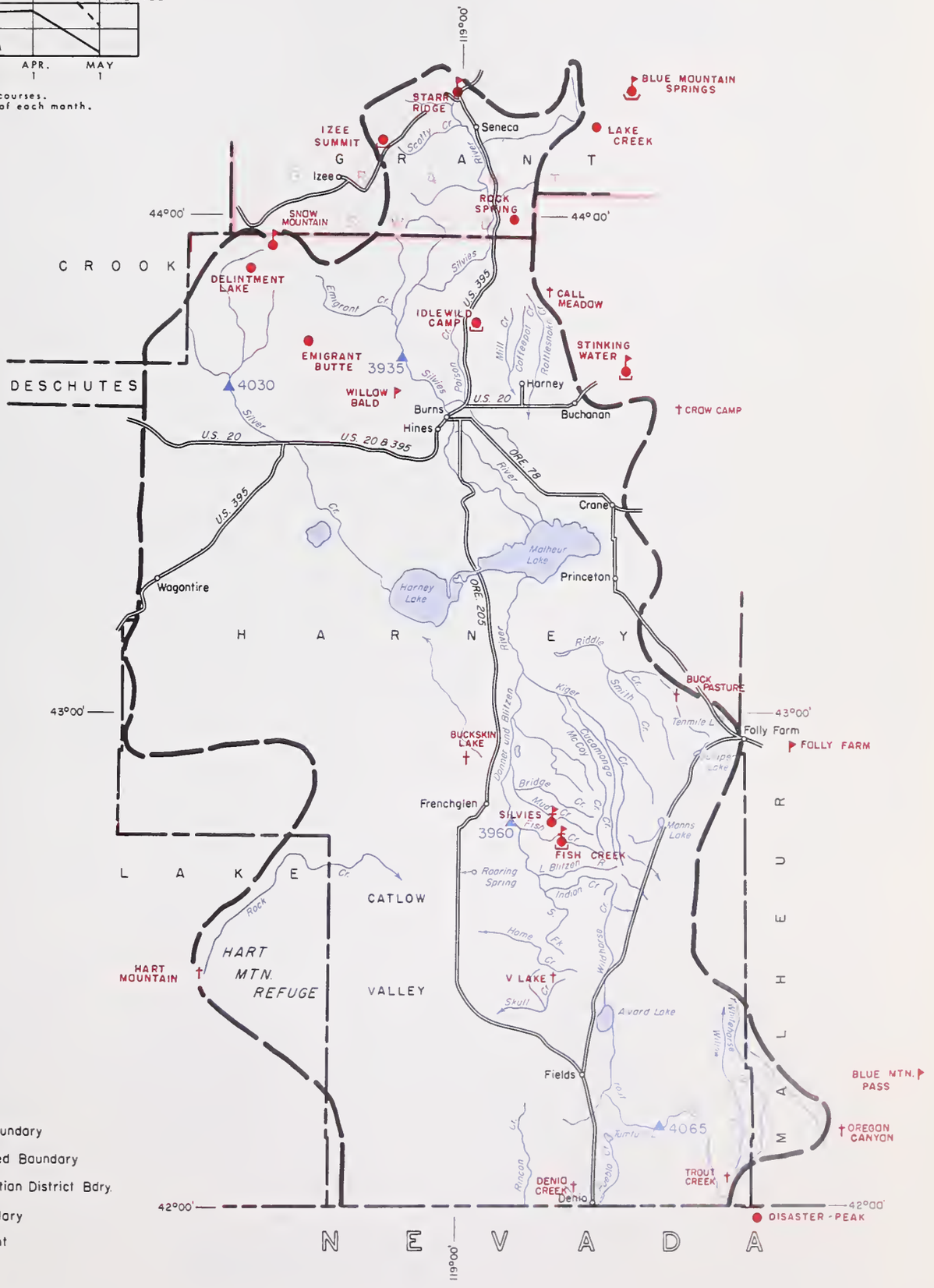
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Blue Mountain Spring	5900	42	16.9	12/28	7.2	7.8	6.6
Fish Creek	7900	48	15.0	c			
Folly Farm	4450	30	12.5	c			
Silvies	6900	48	16.4	c			
Snow Mountain	6300	48	16.7	c			
Starr Ridge	5150	36	10.6	12/29	7.5	10.0	7.5
Stinking Water	4800	48	21.9	b			
Willow-Bald	5000	24	6.6	12/28	3.2	6.4	3.4

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HARNEY BASIN WATERSHEDS







LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- ● Snow Course
- † Aerial Snow Depth Gage
- ⚑ Soil Moisture Station
- ⌴ Precipitation Gage

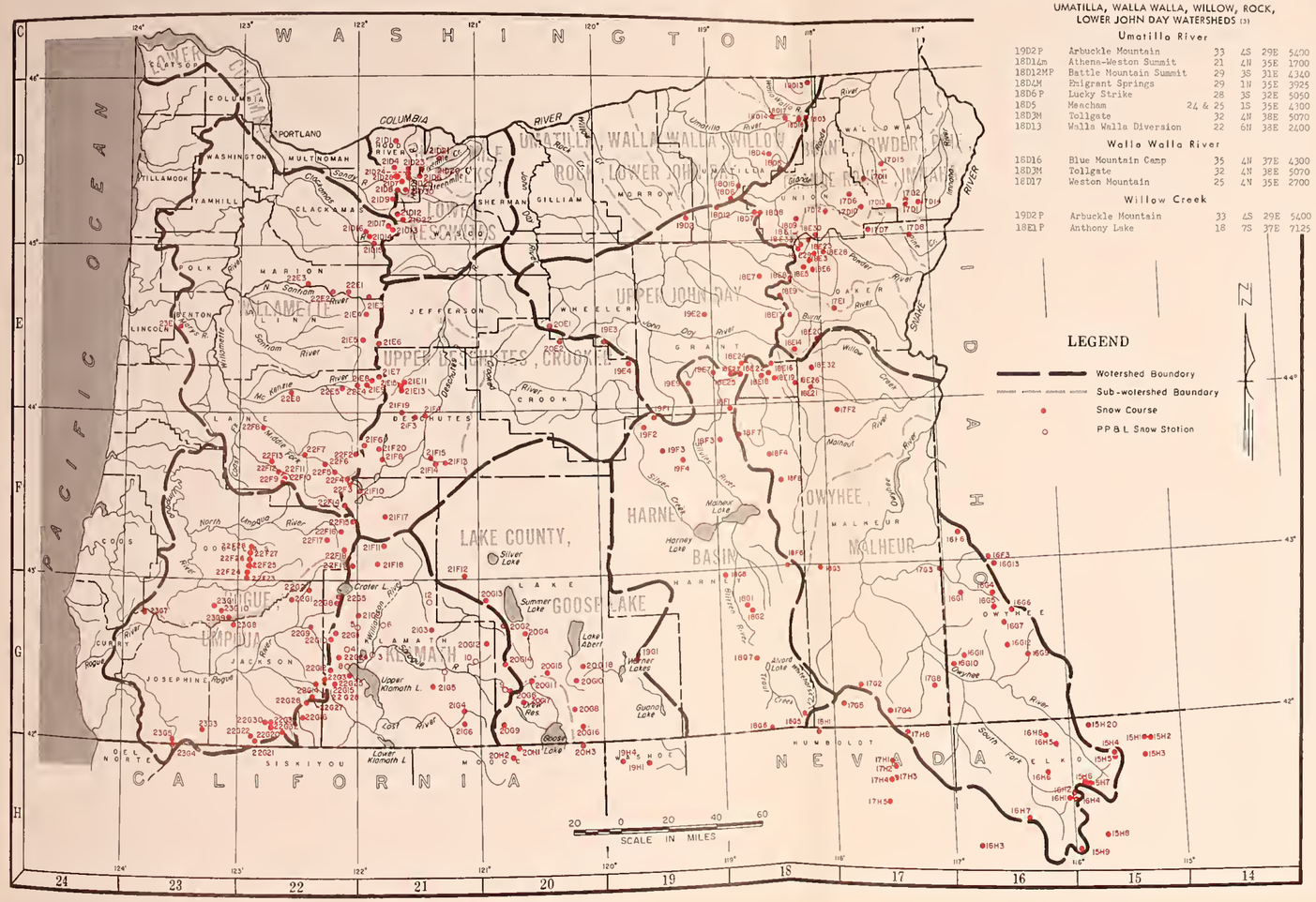
SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Blue Mountain Springs	5900	12/28	14	3.5	6.8	6.0
Buck Pasture	5700	c				
Buckskin Lake	5200	c				
Call Meadows	5340	c				
Crow Camp	5500	c				
Delintment Lake	5600	c				
Denio Creek	6000	c				
Disaster Peak (Nev.)	6500	c				
Emigrant Butte	5000	c				
Fish Creek	7900	c				
Hart Mountain	6350	c				
Idlewild Camp	5200	12/29	5	0.9	1.8	2.1
Izee Summit	5293	12/29	6	1.6	3.8	3.1 h
Lake Creek	5120	12/29	10	2.4	4.4	- -
Oregon Canyon	6950	c				
Rock Spring	5100	12/29	4	0.7	2.1	2.1
Silvies	6900	c				
Snow Mountain	6300	c				
Starr Ridge	5150	12/29	3	0.8	2.5	2.4 h
Stinking Water	4800	12/26	7	1.7	2.0	2.0 h
Trout Creek	7800	c				
"V" Lake	6600	c				

"The Conservation of Water begins with the Snow Survey"

NUMBER	NAME		LOCATION SEC.	TWP.	RGE.	ELEV.
OWYHEE, MALHEUR WATERSHEDS (1)						
Owyhee River						
16H6	Antelope Ridge	(Ida)	20	8S	1E	5900
16G9M	Battle Creek	(Ida)	10	11S	1E	5700
15H3MA	Bear Creek	(Nev)	31	46N	58E	7800
15H3MP	Big Bend	(Nev)	30	45N	56E	6700
17H2Z	Blue Mtn Pass		4	38S	42E	5290
17H2	Buckskin, Lower	(Nev)	25	45N	39E	6700
17H1	Buckskin, Upper	(Nev)	11	45N	39E	7200
16G10a	Bull Basin	(Ida)	29	12S	5W	5600
16H6a	Columbia Basin	(Nev)	31	43N	53E	6650
16H6a	Disaster Peak	(Nev)	8	47N	34E	6500
18H1	Fawn Creek	(Nev)	2	45N	52E	7000
16H8	Fish Creek		4	33S	33E	7900
18G2MA	Folly Farm Summit		8	30S	38E	4450
16G5	Fox Creek	(Nev)	33	46N	58E	6800
15I2	Fry Canyon	(Nev)	31	43N	54E	6700
15H7	Gold Creek	(Nev)	31	45N	56E	6600
15H5	Granite Peak	(Nev)	22	44N	39E	7800
17H4	Hyde Pasture	(Ida)	31	8S	2W	5800
16G5a	Jack Creek, Lower	(Nev)	18	42N	53E	6800
16H2M	Jack Creek, Upper	(Nev)	9	42N	53E	7250
16H2	Jack Peak	(Nev)	28	42N	53E	8420
16H4	Jordan Valley		0	30S	46E	4390
17G3a	Lesance Creek	(Nev)	13	42N	38E	6000
17H5	Laurel Draw	(Nev)	20	45N	53E	6700
16H5	Lookout Butte		2	40S	47E	5650
17G6a	Louse Canyon		27	40S	44E	6420
17G1a	Martin Creek	(Nev)	18	44N	40E	6700
15H20a	Merritt Mountain	(Nev)	10	46N	54E	7000
16H3AP	Midas	(Nev)	18	39N	46E	7200
16G7M	Mud Flat	(Ida)	34	9S	2W	5500
17G5a	Oregon Canyon		8	40S	40E	6950
17H6a	Quinn Ridge	(Nev)	9	47N	41E	6300
16G11aP	Red Canyon	(Ida)	32	11S	4W	6500
15H6MP	Rodeo Flat	(Nev)	36	43N	53E	6800
15H3A	76 Creek	(Nev)	6	44N	58E	7100
16F3APR	Silver City	(Ida)	6	5S	3W	5600
18G1MA	Silvies		35	32S	32½E	6900
16G1	South Mountain No.2	(Ida)	10	2S	5W	6340
16H6a	Succor Creek	(Ida)	25	3S	5W	6100
15H9MP	Taylor Canyon	(Nev)	35	39N	53E	6200
16H7a	Toe Jam	(Nev)	29	40N	50E	7700
15H8	Tremewan Ranch	(Nev)	9	39N	55E	5700
16G4MA	Triangle	(Ida)	25	7S	3W	5150
18G5a	Trout Creek		10	41S	38E	7800
18G7a	W'M Lake		31	35½S	32½E	6600
16G12a	Vaught Ranch	(Ida)	10	11S	1W	5950
16G13a	War Eagle	(Ida)	20	5S	3W	7700
Malheur River						
18K14	Barney Creek		16	14S	36E	5950
18E16MP	Blue Mountain Spring		21	15S	35E	5900
18F6a	Buck Pasture		21	29S	35E	5700
18E21a	Bully Creek		10	17S	37E	5300
18F7a	Call Meadows		29	20S	33E	5340
17F2a	Cottonwood-Indian		10	19S	39E	4320
18E19M	Crane Prairie		24	16S	3¼E	5375
18F8a	Crow Camp		20	14S	38E	4600
18E20	Eldorado Pass		32	16S	36E	4750
18E26a	Flag Prairie		10	16S	33½E	5120
18E18	Lake Creek		13	16S	33½E	5100
18E22a	Logan Valley		23	18S	32E	5100
18F1	Rock Spring		2	16S	37E	5500
18E32P	S. Fk. Willow Cr.		33	21S	3¼E	4800
18F4MP	Stinking Water					

NUMBER	NAME		LOCATION SEC.	TWP.	RGE.	ELEV.
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS						
Burnt River						
18E14	Barney Creek		16	14S	36E	5950
18E13M	Blue Mountain Summit		6	12S	36E	5098
17E1MP	Dooley Mountain		32	11S	40E	5430
18E20	Eldorado Pass		20	14S	38E	4600
18E2	Gold Center		21	9S	36E	5340
18E9	Tipton		34	10S	35½E	5100
Powder River						
18E1	Anthony Lake		18	7S	37E	7125
18E33	Anthony Ski Hill					
18E5	Bourne		33	8S	37E	5800
17E1MP	Dooley Mountain		32	11S	40E	5430
18E3	Ellertson Meadows		18	8S	38E	5400
18E8	Gold Center		21	9S	36E	5340
18E6A	Goodrich Lake		4	9S	38E	6775
18E29	Intake House		5	8S	38E	4930
17D12m	Ladd Summit		5	5S	39E	3730
18E23	Little Alps		10	7S	37E	6200
18E30	Little Antone		1	7S	37E	5000
18E28	Power Plant		33	7S	38E	3990
17D7	Taylor Green		3	6S	42E	5740
Pine Creek						
17D8	Schneider Meadows		35	6S	45E	5400
Grande Ronde River						
17D1	Aneroid Lake No. 1		16	4S	45E	7480
17D2P	Aneroid Lake No. 2		16	4S	45E	7300
18E1	Anthony Lake		18	7S	37E	7125
17D10a	Bald Mountain		14	4S	43E	6700
18D9	Beaver Reservoir		8	5S	37E	5340
18D8P	County Line		28	4S	34E	4800
18D6P	Lucky Strike		28	3S	32E	5050
18D5	Meacham	24 & 25	1S	35E	4300
18D3P	Tollgate		32	4N	38E	5070
17D15a	TV Ridge		12	2S	43E	7000
Imnaha River						
17D1	Aneroid Lake No. 1		16	4S	45E	7480
17D2P	Aneroid Lake No. 2		16	4S	45E	7000
17D14a	Big Sheep		33	4S	46E	6200
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS (3)						
Umatilla River						
19D2P	Arbuckle Mountain		33	4S	29E	5400
18D14m	Athena-Weston Summit		21	4N	35E	1700
18D12MP	Battle Mountain Summit		29	3S	31E	4340
18D4M	Emigrant Springs		29	1N	35E	3925
18D6P	Lucky Strike		28	3S	32E	5050
18D5	Meacham	24 & 25	1S	35E	4300
18D3M	Tollgate		32	4N	38E	5070
18D13	Walla Walla Diversion		22	6N	38E	2400
Walla Walla River						
16D16	Blue Mountain Camp		35	4N	37E	4300
18D3M	Tollgate		32	4N	38E	5070
18D17	Weston Mountain		25	4N	35E	2700
Willow Creek						
19D2P	Arbuckle Mountain		33	4S	29E	5400
18E1P	Anthony Lake		18	7S	37E	7125



NUMBER	NAME		LOCATION SEC.	TWP.	RGE.	ELEV.
UPPER JOHN DAY WATERSHEDS (4)						
Upper John Day River						
19D2P	Arbuckle Mountain		33	4S	29E	5100
18D12MP	Battle Mountain Summit		29	3S	31E	4340
19E2M	Beech Creek Summit		4	12S	30E	4800
18E16MP	Blue Mountain Spring		21	15S	35E	5900
18E13M	Blue Mountain Summit		6	12S	36E	5098
19E3MP	Derr		14	13S	23E	5670
18E27a	East Fork Canyon		15	15S	32E	5700
18E8	Gold Center		21	9S	36E	5340
18E24a	Indian Cr. Butte		5	15S	33E	6550
19E9P	Izee Summit		28	16S	29E	5293
18D6P	Lucky Strike		28	3S	32E	5050
20E1MP	Marks Creek		25	12S	19E	4540
20E2	Ochoco Meadows		21	13S	20E	5200
18E7	Olive Lake		24	4S	31E	6000
18D7	Schoolmarm		28	4S	32E	4775
19E1M	Snow Mountain		1	14S	26E	6300
19E7M	Starr Ridge		20	15S	31E	5150
18E9	Tipton		34	10S	35½E	5100
18E25MP	Williams Ranch		20	15S	32E	4500
UPPER DESCHUTES, CROOKED WATERSHEDS (5)						
Upper Deschutes River						
21E11	Black Pine Spring		14	16S	9E	4600
21F8	Caldwell Ranch		30	21S	8E	4400
22F3	Cascade Summit		7	23S	6E	4880
21F11	Chemult		21	25S	8E	4760
21F20P	Deer Creek		25	20S	7E	4554
21F14	Fire Road		36	21S	11E	5050
21E6	Hogg Pass		24	13S	7½E	4755
21F4	Hungry Flat		30	18S	11E	4200
21F6	Irish-Taylor		25	20S	6E	5500
21F17	Movich		29	25S	25E	4700
21F10	New Crescent Lake		11	24S	6E	4800
21F19P	New Dutchman Flat #2		21	18S	9E	6400
21F13P	Paulina Lake		34	21S	12E	6330
21F15	Paulina Prairie		28	21S	11E	4245
21F3	Tangent		28	18S	10E	5400
21E15	Three Creeks Butte		27	16S	9E	5200
21E13	Three Creek Meadows		34	16S	9E	5650
22F2P	Waldo Lake		15	21S	6E	5500
22F14*	Willamette Pass		33	24S	5½E	5600
22F15	Windigo Pass		32	25S	6E	5800
Crooked River						
19E3MP	Derr		14	13S	23E	5670
20E1MP	Marks Creek		25	12S	19E	4540
20E2	Ochoco Meadows		21	13S	20E	5200
19F1M	Snow Mountain		1	10S	26E	6300
19E4	Tamarack		8	15S	25E	4800
HOOD, MILE CREEKS LOWER DESCHUTES WATERSHEDS (6)						
Hood River						
21D6P	Brooks Meadows		2	2S	10E	4300
21D25M	Cooper Spur		6	2S	10E	3490
21D1	Greenpoint Reservoir		28	2N	9E	3400
21D20	Knebal Springs		31	1S	11E	3850
21D23	Parkdale		6	1S	10E	1770
21D8*	Phlox Point		6	3S	9E	5600
21D4	Red Hill		20	1S	9E	4400
21D9	Still Creek		25	3S	9E	3700
21D7	Tilly Jane		15	2S	9E	6000
21D21	Ulrich Ranch Junction		28	1S	11E	3350
21D30	Umbrella Falls		3	3S	9E	5400
21D24	Upper Valley		20	1S	10E	2530
21D28	Switchback		28	1S	9E	3255
Mile Creek - Mosier Creek						
21D6P	Brooks Meadows		2	2S	10E	4300
21D20	Knebal Springs		31	1S	11E	3350
21D21	Ulrich Ranch Junction		28	1S	11E	3350
Lower Deschutes River						
21D12	Clear Lake		29	4S	9E	3500
21D22	Clear Lake Experimental		29	4S	9E	3500
21E6	Hogg Pass		24	13S	7½E	4755
LOWER COLUMBIA WATERSHEDS (7)						
Sandy River						
21D8*	Phlox Point		6	3S	9E	5600
21D9	Still Creek		25	3S	8½E	3700
WILLAMETTE WATERSHEDS (8)						
Clackamas River						
21D15	Big Bottom		25	6S	7E	2118
21D13	Clackamas Lake		35	5S	6½E	3400
21D12	Clear Lake		29	4S	9E	3500
21D16	Lake Harriet		4	6S	7E	2045
21D14*	Peavine Ridge	14 & 15	6S	7E	3500
21D8*	Phlox Point		6	3S	9E	5600
21D9	Still Creek		25	3S	8½E	3700
21D17	Timothy Lake		26	5S	8E	3295
Santiam River						
22E1	Detroit (town)		1	10S	5E	1610
22E2	Detroit Dam		7	10S	5E	1580
21E6	Hogg Pass		24	13S	7½E	4755
21E4	Marion Forks		28	11S	7E	2730
22E3	Mill City		29	9S	3E	826
21E5	Santiam Junction		14	13S	7E	3990
21E3	Whitewater Bridge		28	10S	7E	2175
McKenzie River						
21E8	Dead Horse Grade		13	16S	7E	3800
22E4	Lost Creek Ranch		24	16S	6E	1956
21E7	McKenzie		35	15S	7½E	4800
22E5	McKenzie Bridge		13	16S	5E	1322
22E6	Vida		28	16S	2E	800
21E9	White Branch Slide		15	16S	7E	2800

NUMBER	NAME		LOCATION SEC.	TWP.	RGE.	ELEV.
Middle Fork Willamette River						
22F3	Cascade Summit		7	23S	6E	4880
22F6	McCredie Springs		36	21S	4E	2120
22F8	Meridian Dam		13	19S	1W	750
22F7	Oakridge		16	21S	3E	1310
22F5	Railroad Overpass		21	22S	6E	2750
22F4	Salt Creek Falls		32	22S	5½E	4000
22F2P	Waldo Lake		15	21S	6E	5500
22F14*	Willamette Pass		33	24S	5½E	5600
Coast Fork Willamette River						
22F9	Champion		12	23S	1E	4500
22F10	Golden Curry Creek		1	23S	1E	3136
22F13	Laying Creek R. S.		31	21S	1E	1200
22F12	Lund Park		22	22S	1E	1720
22F11	Weaver Creek		35	22S	1E	2440
Mary's River						
23E1	Mary's Peak		21	12S	7W	3620
ROGUE, UMPQUA WATERSHEDS (9)						
Rogue River						
23G4	Althouse		17	41S	7W	4530
22G6	Annie Spring		19	31S	6E	6018
22G28	Beaver Dam Creek		1	38S	4E	5100
22G21P	Dig Red Mountain		31	40S	1W	6500
22G13	Hillicle Creek Divide		30	36S	5E	5100
22G23	Caliben		16	40S	1E	6500
22G27	Deadwood Junction		8	38S	4E	4600
22F19	Diamond-Crater Summit		34	28S	0E	5800
22G14P	Fish Lake		3	37S	4E	4865
22G12	Fourmile Lake		9	36S	5E	6000
23G3	Grayback Peak		9	40S	5W	6000
22G26	Howard Prairie		32	38S	4E	4500
22G16	Hyatt Prairie Reservoir		15	39S	1E	4900
23G8	King Mountain No. 1		8	41S	4W	4800
23G9	King Mountain No. 2		31	40S	4W	3646
23G10	King Mountain No. 3		29	40S	4W	2550
23G11	King Mountain No. 4		20	40S	4W	1779
22G22	Little Red Mountain		25	40S	2W	6500
22G31	Mt. Ashland Switchback		15	40S	1E	6400
23G5	Page Mountain		8	41S	3W	4045
22G5	Park Headquarters		8	31S	2E	1650
22G10P	Seven Lakes No. 1		3	34S	5E	4800
22G11	Seven Lakes No. 2		26	33S	5E	6200
22G7	Silver Burn		10	30S	4E	3720
22G20	Stekiyou Summit		17	40S	2E	4610
22G32	Ski Bowl Road		22	40S	1E	4600
22G9	South Fork Canal		12	37S	3E	1500
22G1	Whalebach		3	31S	2E	5140
Umpqua River						
22F9	Champion		12	23S	1E	4500
22F18P	Diamond Lake		29	27S	6E	5315
23G7	Eden Valley Summit		10	32S	10W	2900
22F16	North Umpqua		19	26S	6E	4715
22F23	Red Butte No. 1		36	29S	2W	4560
22F24	Red Butte No. 2		30	27S	1W	4000
22F25	Red Butte No. 3		30	27S	1W	3500
22F26	Red Butte No. 4		36	27S	1W	3000
22F27	Red Butte No. 5		20	29S	1W	2500
22F28	Red Butte No. 6		17	29S	1W	2000
22F17	Trap Creek		1	28S	1W	1900
22G1	Whalebach		3	31S	2E	5140
22F15	Windigo Pass		20	25S	6E	5800
KLAMATH WATERSHEDS (10)						
Klamath River						
22G6	Annie Spring		19	31S	6E	6018
22G13	Dillie Creek Divide		30	36S	5E	5100
21G5	Ely Mountain	15 & 22	37S	11E	5090
21F11	Chemult		21	27S	8E	4760
22G2L*	Cold Springs Camp		12	35S	5E	6100
20G12a	Crazyman Flat		9	34S	15E	6100
20I2a	Crowder Flat	(Cal)	31	47N	11E	5200
22F19	Diamond-Crater Summit		34	28S	0E	5800
21F18	Diamond Lake Jct. (97)		1	29S	7E	4600
21G6a	Dog Hollow		1	40S	14E	4900
20G14a	Finley Corrals		11	36S	16E	6000
22G12	Fourmile Lake		9	36S	5E	6060
21G4P	Gerber		12	37S	13E	4850
22G16	Hyatt Prairie Reservoir		15	39S	1E	4900
22G26	Howard Prairie		32	38S	4E	4500
22G15	Lake of the Woods		11	39S	5E	4960
22G5	Park Headquarters		8	31S	2E	1650
22G25	Pelican Guard Station		9	39S	6E	4150
20G6MP	Quartz Mountain		2	34S	16E	5320
22G10P	Seven Lakes No. 1		3	34S	5E	6200
22G11	Seven Lakes No. 2		26	33S	5E	6200
20I1a	State Line	(Cal)	21	48N	11E	5750
20G7AP	Strawberry		4	40S	16E	5760
20G2AP	Summer Rim		15	33S	16E	7200
21G2	Sun Mountain		22	32S	7½E	5350
20G13a	Sycan Flat		25	31S	14E	5500
21G3	Taylor Butte		22	33S	11E	5160

NUMBER	NAME		LOCATION SEC.	TWP.	RGE.	ELEV.
Pacific Power and Light Company's Snow Stations						
1	Beatty (PP&L)		22	36S	12E	4300
10	Bly 101 Ranch (PP&L)		22	35S	14E	4800
3	Chiloquin (PP&L)		34	34S	7E	4187
4	Crystal (PP&L)		26	34S	6E	4200
5	Fort Klamath (PP&L)		22	33S	7½E	4350
6	Kirk (PP&L)		1	33S	7E	4533
9	Quartz Mountain (PP&L)		33	37S	16E	5504
8	Harriman Lodge (PP&L)		3	36S	6E	4200
12	Yamsay (PP&L)		20	31S	11E	4600
LAKE COUNTY, GOOSE LAKE WATERSHEDS (11)						
Goose Lake						
20G15a	Bear Flat Meadow		27	36S	19E	5900
20G8MP	Gamma Creek		5	39S	21E	5720
20G11a	Cox Flat		16	37S	18E	5750
20G16a	Crane Mountain		13	40S	21E	6020
20I2a	Crowder Flat	(Cal)	30	47N	11E	5200
20I3a	Dismal Swamp	(Cal)	31	48N	16E	5200
20G17a	Fulton Meadow		28	38S	18E	6800
20G6MP	Quartz Mountain		2	38S	16E	5320
20I1a	State Line	(Cal)	21	48N	11E	5750
20G9AP	Strawberry		4	40S	16E	5760
Abert Lake						
20G15a	Bear Flat Meadow		27	36S	19E	5900
20G18AP	Colvin Creek		12	3eS	21E	6550
20G11a	Cox Flat		16	37S	18E	5750
20G14a	Finley Corrals		11	36S	16E	6000
20G4	Mill Creek		1	34S	17E	6200
20G6MP	Quartz Mountain		2	38S	16E	5320
20G10a	Sherman Valley		15	37S	21E	6600
Summer Lake						
20G2AP	Summer Rim		15	33S	16E	7200
Silver Lake						
21F12P	Silver Creek	25 &26	29S	13E	4900
20G13a	Sycan Flat		25	31S	14E	5500
Warner Lake						
20G8MP	Gamma Creek		5	39S	21E	5720
20G16a	Crane Mountain		13	40S	21E	6020
20I3a	Dismal Swamp	(Cal)	31	48N	16E	5200
19G1a	Hart Mountain		1	36S	25E	6350
20G10a	Sherman Valley		15	37S	21E	6600
Guano Lake						
19H1	Bald Mountain	(Nev)	17	45N	21E	6720
19G1a	Hart Mountain		1	36S	25E	6350
19H6a	Little Bally Mt.	(Nev)	8	45N	19E	6600
HARNEY BASIN WATERSHED (12)						
Silvies River - Silver Creek						
18F7a	Call Meadows		29	20S	33E	5340
19H2	Dahlonega Lake		28	19S	26E	5600
19F3	Emigrant Butte		14	21S	29E	5000
18F9P	Idlewild Camp		27	20S	31E	5200
19E7P	Izee Summit		28	16S	29E	5293
18F1	Rock Spring		23	18S	32E	5100
19F1M	Snow Mountain		1	19S	26E	6300
19E4M	Starr Ridge		20	15S	31E	5150
18F4MP	Stinking Water		33	21S	3¼E	4800
19F4a	Willow-Unid		19	22S	29E	5000
Donner Und Blitzen River						
18F6a	Buck Pasture		21	20S	35E	5700
18G2MAP	Fish Creek		4	33S	32½E	7900
19G1a	Hart Mountain		1	36S	25E	6350
18G1MA	Silvies		35	32S	32½E	6900
18G7a	W'M Lake		31	35½S	32½E	6600
Trout and Whitehorse Creeks						
18G6a	Buck Creek		14	41S	34E	6000
18H1	Bluewater Peak	(Nev)	8	47N	34E	6500
17G5a	Oregon Canyon		8	40S	40E	6950
18G5a	Trout Creek		10	41S	38E	7800
Harney Lake						
18G8a	Buckskin Lake		2	30S	30E	5200

LEGEND

19D2	SNOW COURSE ONLY
19D2M	SNOW COURSE AND SOIL MOISTURE
19D2MA	SNOW COURSE, SOIL MOISTURE AND AERIAL MARKER
19D2A	SNOW COURSE AND AERIAL MARKER
19D2m	SOIL MOISTURE ONLY
19D2*	AERIAL MARKER ONLY
19D2P	SNOW COURSE AND PRECIPITATION GAGE
19D2p	PRECIPITATION GAGE ONLY
*	RADIO TELEMETRY

Map and Index to OREGON SNOW COURSES

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA SCS-PORTLAND, OREG. 1965 M-1874

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The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE
- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY
- Douglas County Water Resources Survey

FEDERAL
- Department of Agriculture
  - Cooperative Extension Service
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - Weather Bureau
- Department of the Interior
  - Bonneville Power Administration
  - Bureau of Land Management
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
  - National Park Service
- Department of National Defense
  - Corps of Army Engineers

PUBLIC UTILITIES
- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES
- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS
- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warmsprings Irrigation District

PRIVATE ORGANIZATIONS
- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

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SOIL CONSERVATION SERVICE
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Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation , navigation , mining and industry

"The Conservation of Water begins with the Snow Survey"